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STEROID USE IN PROFESSIONAL BASEBALL AND ANTI–DOPING ISSUES IN AMATEUR SPORTS

HEARING

BEFORE THE

SUBCOMMITTEE ON CONSUMER AFFAIRS, FOREIGN COMMERCE AND TOURISM

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED SEVENTH CONGRESS

SECOND SESSION

JUNE 18, 2002

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ONE HUNDRED SEVENTH CONGRESS

SECOND SESSION

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CONTENTS

WITNESSES

STEROID USE IN PROFESSIONAL BASEBALL AND ANTI–DOPING ISSUES IN AMATEUR SPORTS

TUESDAY, JUNE 18, 2002

U.S. SENATE,
SUBCOMMITTEE ON CONSUMER AFFAIRS, FOREIGN COMMERCE AND TOURISM,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Subcommittee met, pursuant to notice, at 9:30 a.m. in room SR–253, Russell Senate Office Building, Hon. Byron L. Dorgan, Chairman of the Subcommittee, presiding.

OPENING STATEMENT OF HON. BYRON L. DORGAN, U.S. SENATOR FROM NORTH DAKOTA

Senator DORGAN. We'll call the Subcommittee hearing to order. If we can ask that the door be closed, please.

Good morning. This morning we are going to hold a Subcommittee oversight hearing on the subject of steroid use in baseball, and we will deal with the use of performance-enhancing drugs in other sports, as well.

Following a rather lengthy article in Sports Illustrated on the issue of steroid use in baseball, and other reports over a long period of time about the use of performance-enhancing drugs, we decided to hold this hearing. Senator McCain had sent a request for a hearing, and I felt a hearing was appropriate, as well. And so this is an oversight hearing that will not necessarily lead to Federal legislation, although we hope to hear about this issue this morning from a number of different points of view and, from that, evaluate what, if any, legislative action is necessary.

Let me say that, first of all, I'm a big baseball fan. I grew up playing baseball in a town of 400 people. I grew up 50 miles from the nearest daily newspaper. I rushed to get it every day so that I could get to the sports page to try to find out, in that tiny little piece in a daily newspaper of a town of 10,000, just a little information every day of what was happening in baseball. I was quick to get there every single day to find out how my favorite player, Willie Mays, and others, were doing. So I come to this with a love of baseball, an appreciation of the splendid athletes and the owners and others who are involved in baseball.

Baseball is truly "America's pastime," as it's called. To become a big leaguer is synonymous with success. And serious questions

these days are raised about that, and we want to explore them in some detail this morning.

Let me start by saying we invited a fair number of baseball players, especially retired players, to be with us this morning. None of them chose to be here at this hearing. But serious questions are being raised by baseball players themselves, both retired and active players, about what some say is an epidemic of performing-enhancing drugs among many of baseball's most talented competitors.

Fairness should set the standard for the next generation of amateur and professional athletes, not performance-enhancing drugs.

The article I mentioned, which was an investigative article in a Sports Illustrated magazine, described former National League Most Valuable Player Ken Caminiti as saying that he was on steroids when he won the prestigious Most Valuable Player award in 1996. Caminiti maintains that the pressures to perform are so great, he wouldn't discourage others from using steroids. He also said that at least half of the Major League Ballplayers use steroids. We invited Mr. Caminiti to be present today, as well.

Another retired baseball star, Jose Canseco, is working on a book in which he reportedly will detail his earlier claims that up to 85 percent of his former colleagues use steroid drugs. These claims, by some, have been discounted as not at all related to fact. But they raise questions, and we want to have people respond to those questions today.

Mr. Caminiti says he started using steroids in 1996. Prior to that time, he had never hit more than 26 home runs in a season. At the end of that year, however, he hit 40 home runs, had a .326 batting average, and was selected the Most Valuable Player in the National League.

The medical consequences of performance-enhancing drugs, and specifically steroids, can be devastating. For example, steroids can cause heart disease, stroke, aggressive behavior, and other kinds of dysfunctions. The damage to baseball's credibility, however, can be as great. Unlike professional football, basketball, or the Olympics, Major League Baseball, at the present time, has no drug testing program. Unfortunately, no current or professional baseball players, as I said, have responded to our invitation today, but we will hear from owners, representatives of the baseball players, and others at this hearing.

So let me just say, as a fan of this wonderful sport, that I want this sport to produce splendid athletes that can be role models for America's youngsters. But I certainly don't want to see America's pastime become a pastime in which these wonderful athletes engage in the use of performance-enhancing drugs in order to make it. That is not what baseball should be about. Drugs have no place in our culture, and certainly not in America's big-league ballparks.

So, as I said, Senator McCain also had requested, with a letter, that we hold a hearing on this subject. I'm pleased to be able to chair that hearing today.

And let me call on my colleague, Senator McCain, for opening comments.

STATEMENT OF HON. JOHN MCCAIN,
U.S. SENATOR FROM ARIZONA

Senator MCCAIN. Well, thank you, Senator Dorgan, for chairing the hearing to discuss the prevalence and effects of performance-enhancing drugs in Major League Baseball and sports in general. And I welcome our witnesses and thank them for appearing today.

I think that everyone should be aware that this Committee does have an oversight responsibility of professional sports and the Olympics, and we do spend time on these issues. And this one, I think, is important, beyond its effect on Major League Baseball players. Like it or not, professional athletes serve as role models to our kids. Mark McGwire's admission, in 1998, that he was using androstenedione to enhance his performance led to a fivefold increase in sales of that dietary supplement. Andro is currently legal and in some ways, I think our witnesses will tell us today, it has some of the same physical effects and adverse health consequences as anabolic steroids.

I'm concerned about baseball. I'm concerned about the possibility of a looming strike. I'm concerned about the health of the baseball players themselves. But I'm more concerned about the effect this recent spate of publicity has on young athletes all over America. If somehow young athletes believe that it is not only acceptable, but that the way to become a Major League Baseball player is through the use of anabolic steroids, that's a terrible message to send to young American men and women.

So I think this issue is more important than just whether a group of highly paid baseball players are using substances that, as witnesses will testify, can be very damaging to their health. It's the example that is set for young Americans that I am concerned about and that we should all be concerned about.

I've gotten to know Mr. Fehr very well. I think he's a fair, decent and eloquent representative of the players. I've had the opportunity of knowing Jerry Colangelo for many years, and I'm very pleased that he's here today. And I hope that Mr. Colangelo, in his testimony, will touch on the fact that the NBA and the NFL—he was involved in the NBA before he was involved in organized baseball—have somehow been able to enact rules and regulations as far as drug testing is concerned, and I hope that baseball players and the players union will look to what's being done in the NBA and the NFL as perhaps a model for what can be adopted by Major League Baseball players.

So I thank you, Mr. Chairman, and I, again, want to point out that this is more important than whether a bunch of highly paid athletes are using anabolic steroids. That's the reason why I think this hearing today is so important. I hope that the players, as well as the owners, understand the damage that this can do to the credibility of the game. I don't think any Major League Baseball player in the record books would like to have an asterisk next to his name for having used steroids in order to enhance his performance in an attempt to attain a lasting record as an outstanding athlete.

So, Mr. Chairman, I thank you for the hearing, and we look forward to hearing the witnesses today.

Senator DORGAN. Senator McCain, thank you.

Senator Brownback?

STATEMENT OF HON. SAM BROWNBACK,
U.S. SENATOR FROM KANSAS

Senator BROWNBACK. Thank you, Mr. Chairman, and thank you for holding the hearing.

I want to join my colleague from Arizona in his comments about the impact of this being broader than just the players themselves. Baseball is America's national pastime and holds a special place in Americana and our hearts.

It's certainly with dismay that I've read so many disturbing comments made by today's ballplayers who got into the use of performance-enhancing drugs and steroids and illegal substances, other than ones that are prescribed by doctors.

Clearly, there seems to be a major problem and a major disappointment requiring redress. It seems to me the simplest course of action would be, as my colleague from Arizona has stated, for Major League Baseball to follow the National Football League and the National Basketball Association and adopt a no-tolerance policy, complete with year-round testing as well as medical treatment and counseling for violators. While these policies may not achieve perfect results, they are an honest effort to do right by their sport, meet the expectations of the fans, and look after the long-term health and welfare of their players.

Now, I understand that Major League Baseball, which supports a no-tolerance policy, is constrained by its collective bargaining agreement with its players and management, and cannot unilaterally impose such a steroid-testing policy. I would urge Major League ballplayers to match management's concern in this matter and employ their representatives to achieve a resolution. I'm confident that management and the players can work through this to everyone's satisfaction, especially the fans and the young children, young players all across the country watching major league sports, who I believe do not want steroid-assisted cheating in a game they love. This is a matter internal to baseball, and that is where it can best be addressed, and I really hope, for the future of the sport and the future of the young players watching those professional athletes all across this country and across the world, that it will be solved by the sport.

Thank you, Mr. Chairman.

Senator DORGAN. Senator Brownback, thank you very much.

Let me make a very important point. I used the names of two retired baseball players today only because those players themselves have been quoted. I think it's important that we not use names of other players. Our goal is not to tarnish the reputation of players. I only used the names of two retired players who had already admitted steroid use and wanted to speak about it publicly. And we had invited both of them to come to this hearing.

The Senate has scheduled a cloture vote at 9:45, which is in about two minutes. What I would like to do, is to recess the hearing for two minutes, having taken these opening statements, and then we will go vote and come back. And at that point, we'll call the witnesses to the witness table and begin. I don't want to interrupt the testimony of the witnesses.

So we will take a ten-minute recess.

[Recess.]

Senator DORGAN. We'd ask if we could reconvene. And if our witnesses could take their seats at the table, I will introduce them.

Starting on my left, we have Mr. Robert Manfred, who is the executive vice president for Labor Relations in the Office of the Commissioner for Major League Baseball. We have Mr. Jerry Colangelo, the managing general partner for the Arizona Diamondbacks, which won the World Series last year. Mr. Colangelo also owns the National Basketball Association's Phoenix Suns team. We also have Donald Fehr, who is the executive director and general counsel for the Major League Baseball Players Association, which is the player's union. He's the lead negotiator for the players in their collective bargaining with owners. And we have Mr. Frank Shorter, chairman of the board of United States Anti-Doping Agency, who is a former Olympic athlete of substantial renown. He won the gold medal in the marathon at the 1972 Olympic Games in Munich, Germany. We have Mr. Greg Schwab, the former all-conference offensive lineman for the University of Oregon, who took steroids in his attempt to make the San Diego Chargers football team. Mr. Schwab has since become an advocate against steroid use, and will help us understand the pressure that high school athletes feel to take steroids or other performance-enhancing supplements. And we have Dr. Bernard Greisemer, a pediatrician from Missouri, who has written extensively about steroid use and teenagers and also has worked as a medical officer at the past four Olympic Games.

Your entire statements will be made part of the permanent record. You may summarize, and we will ask all of you to present your statements, following which we will ask questions.

Mr. Manfred, why don't you proceed?

STATEMENT OF ROBERT D. MANFRED, JR., EXECUTIVE VICE PRESIDENT OF LABOR AND HUMAN RESOURCES, MAJOR LEAGUE BASEBALL

Mr. MANFRED. Thank you. Good morning. My name is Robert Manfred, and I'm executive vice president of Labor and Human Resources for Major League Baseball.

In recent weeks, the issue of steroid use in Major League Baseball has received considerable attention as a result of revelations by two prominent former players. As I sit here today, I cannot tell you whether all of the statements made by these former players are accurate.

What I can tell you is that long before anybody was writing about the use of steroids in the major leagues, our office, at the direction of Commissioner Selig, undertook a multifaceted initiative designed to deal with the related problems of steroids and nutritional supplements.

The Commissioner began this initiative approximately two years ago by convening a meeting of Major League Baseball's medical advisor, Dr. Robert Millman, and group of team doctors. This group of respected physicians came to the meeting burdened by two related concerns. First, they were worried about what they perceived to be a growing trend of steroid use in both the major leagues and

the minor leagues. The doctors believed that steroids were a threat to the health of our players and to the integrity of our game.

Second, the team doctors were concerned that steroid use by Major League players was sending a very dangerous message to young people who dream about becoming major league players. The doctors all agreed that steroid use by young people created health risks even greater than those faced by adults.

The team physicians also came to the meeting armed with troubling data concerning injuries to major league players. The discussion centered on facts such as these. There are approximately 900 major league players on active rosters at any given time. In 2001, that group of 900 players accounted for 467 trips to the disabled list. This is a 16 percent increase from just three years earlier.

Not only are more players going on the disabled list, but their period of disability is increasing. In 2001, players spent a total of 27,430 days on the disabled list, compared to slightly more than 22,000 just three years before. This is an increase of 20 percent. The average stay on the disabled list has also increased.

The cost of payments to disabled players increased from $129 million in 1998 to a staggering $317 million last year. While the doctors could not scientifically establish a causal connection between the increase in injuries and steroid use, there was a strong consensus that steroids were a contributing factor. In this regard, the doctors noted a change in the type of injuries suffered by players, with many of the injuries being associated with significantly increased muscle mass operating on the same joints, ligaments, and tendons.

Last, the doctors raised a topic that should be of great concern to Congress. They noted that since the passage of the Dietary Supplement Health and Education Act, nutritional supplement manufacturers have been given much greater freedom to market potentially dangerous products essentially without regulation, provided that the products are not claimed to prevent, diagnosis, treat, or cure a disease or illness. Many of the doctors expressed the view that some nutritional supplements, particularly androstenedione, had all of the properties of an anabolic steroid.

In the wake of this meeting, Commissioner Selig spearheaded the development of a four-point initiative to address the issue of steroids in professional baseball. The goal of the initiative was and is to eliminate the use of steroids and dangerous nutritional supplements in professional baseball.

The first point in the program involved the continued funding of scientific research on the nutritional supplement androstenedione in an effort to confirm that the supplement, in fact, has the characteristics of an anabolic steroid. In conjunction with the players association, the Office of the Commissioner funded research on this topic at Harvard. In brief, the study indicates that, taken in sufficient quantities, androstenedione elevates the level of testosterone in the body in the same manner as an anabolic steroid. I recommend the article that summarizes this research to you and urge Congress to consider passing legislation that would regulate androstenedione and related substances, such as DHEA.

The second point in the Commissioner's initiative was education. We felt that it was important for our major league and minor-

league players to understand the essential facts related to steroids and nutritional supplements and the health risks associated with those substances. Again in conjunction with the players association, an impressive educational program was developed. Dr. Millman and Dr. Joel Soloman, the players association's medical advisor, jointly authored a booklet entitled "Steroids and Nutritional Supplements," which has been distributed to all major league and minor league players. In addition, over the last two years, all major league and minor league players have attended in person steroid education programs.

The third point in the Commissioner's initiative was the promulgation of the Minor League Drug Prevention and Treatment Program. The new policy implemented by the Commissioner dramatically increased the role of the Office of the Commissioner in minor league testing, banned the use of all steroids and androstenedione, subjected all minor league players to three random tests each year, mandated individualized treatment programs for first offenders, required discipline for subsequent offenders, and established confidentiality as a central tenet of the program. Last year, the Commissioner's office spent more than a million dollars just on the testing component of this program.

The fourth point in the Commissioner's initiative was to negotiate a steroid program applicable to major league players. I say "negotiate," because drug testing is, of course, a mandatory topic of collective bargaining with the players association.

Contrary to the impression created by Mr. Fehr's written statement, we do not have an agreed-upon steroid policy in Major League Baseball. The Commissioner has unilaterally promulgated a policy on steroids that the union has consistently said is not binding on its players. While we have worked together in certain situations, the current regulation is ad hoc at best, and dysfunctional at worst.

To address this problem, we made a comprehensive proposal on steroids to the players association last March. That proposal would ban the use of steroids and androstenedione, would require three tests for all major league players each year, would provide treatment programs for first offenders, would require discipline for repeat offenders, would establish confidentiality as a central tenet of the program, and would involve the participation of the players association and its medical advisor in the administration of the program.

To date, we have received no substantive response from the players association to our March proposal. We remain hopeful, however, that the Players Association will come forward and address this issue in a meaningful way at the collective bargaining table. Over the long term, an effective, confidential, treatment-based program, including testing, will be good for all players and for the game.

[The prepared statement of Mr. Manfred follows:]

PREPARED STATEMENT OF ROBERT D. MANFRED, JR., EXECUTIVE VICE PRESIDENT OF LABOR AND HUMAN RESOURCES, MAJOR LEAGUE BASEBALL

Good morning. My name is Robert Manfred and I am Executive Vice President of Labor and Human Resources for Major League Baseball. I report to Commissioner Allan H. Selig and am principally responsible for the collective bargaining relationships with the Major League Baseball Players Association ("MLBPA") and the

World Umpires Association ("WUA"). I have day-to-day responsibility for the drug policies that apply to these unionized employees, as well as the employees of Central Baseball in New York.

In recent weeks, the issue of steroid use in Major League Baseball has received considerable attention as a result of revelations by two prominent former players, one through statements made in a *Sports Illustrated* article. As I sit here today, I cannot tell you whether all of the statements made by those former players are accurate. What I can tell you is that long before anyone was writing about steroids in the Major Leagues, our office, at the direction of Commissioner Selig, under took a multi-faceted initiative designed to deal with the related problems of steroids and nutritional supplements.

The Commissioner began this initiative approximately two years ago by convening a meeting of respected team doctors as well as Major League Baseball's medical advisor, Dr. Robert Millman. This group of respected physicians came to the meeting burdened by two related concerns. First, they were concerned about what they perceived to be a growing trend of steroid use at the Major League and minor league levels. The doctors all agreed that steroids were a threat to the health of our players and to the integrity of our game. Second, the team doctors were concerned that steroid use by Major League players was sending a very dangerous message to young people who dream about becoming Major League players. The doctors all agreed that steroid use by young people created health risks even greater than those faced by adults.

The team physicians also came to the meeting armed with troubling data concerning injuries to Major League players. The discussion centered on facts such as these:

- There are between 850 and 900 players on active Major League rosters and in 2001 that group of players accounted for 467 trips to the disabled list.
- Those 467 trips to the disabled list was a 16 percent increase from 1998, just three seasons earlier.
- Not only are more players going on the disabled list, but their period of disability is increasing. In 2001, players spent a total of 27,430 days on the disabled list compared to 22,100 days in 1998, an increase in nearly 20 percent. The average stay on the disabled list increased from 55 to 58 days.
- The cost of payments to disabled players increased from $129 million in 1998 to a staggering $317 million in 2001. This trend appears to be continuing in 2002.

While the doctors could not scientifically establish a causal connection between the increase in injuries and steroid use, there was a strong consensus that steroid use was a major contributing factor. In this regard, the doctors noted a change in the type of injuries suffered by players, with many of the injuries being associated with a significant increase in muscle mass.

Last, the doctors raised a topic that should be of great concern to Congress. They noted that since the passage of the Dietary Supplement Health and Education Act, nutritional supplement manufacturers have been given much greater freedom to market potentially dangerous products, essentially without regulation, provided that the products are not claimed to prevent, diagnose, treat or cure a disease or illness. Many of the doctors expressed the view that some nutritional supplements, particularly androstenedione, had all of the properties of an anabolic steroid, yet they could be marketed without the restrictions imposed by the Anabolic Steroid Control Act of 1990.

In the wake of this meeting, Commissioner Selig spearheaded the development of a four-point initiative to address the issue of steroids in professional baseball. The goal of the initiative was and is to eliminate the use of steroids and dangerous nutritional supplements in professional baseball for the following reasons: (1) To protect the health of our players, (2) to preserve the integrity of the competition on the field, and (3) to prevent young men from facing the difficult choice between using steroids or facing a competitive disadvantage in pursuing their life-long dream of playing Major League Baseball.

The first point in the program involved the funding of scientific research on the nutritional supplement androstenedione in an effort to confirm that the supplement in fact has the characteristics of an anabolic steroid. In conjunction with the MLBPA, the Office of the Commissioner funded research on this topic at Harvard University. The results of that study are set forth in an article attached hereto as Exhibit A.* In brief, the study indicates that, taken in sufficient quantities,

*The information referred to has been retained in Committee files.

androstenedione elevates the level of testosterone in the body in the same manner as an anabolic steroid. I recommend this article to you and urge Congress to consider passing legislation that would regulate androstenedione and related substances such as DHEA (dihydroepiandrosterone).

The second point in the Commissioner's initiative was education. We felt it was important for our Major League and minor league players to understand the essential facts related to steroids and nutritional supplements and the health risks associated with those substances. Again in conjunction with the MLBPA, an impressive educational program was developed. Dr. Millman and Dr. Joel Soloman, the MLBPA's medical advisor, jointly authored a booklet entitled "Steroids and Nutritional Supplements" which has been distributed to all Major League and minor league players and is attached hereto as Exhibit B. In addition, during spring training, all players were required to attend educational sessions conducted by physicians selected by Central Baseball.

The third point in the Commissioner's initiative was the promulgation of the Minor League Drug Prevention and Treatment Program, a copy of which is attached hereto as Exhibit C. Historically, each individual Club has determined whether and how to test and treat the non-union players in its minor league system. Prior to the 2001 season, the Commissioner determined that this system of individual Club control was not as effective as it needed to be. The new policy implemented by the Commissioner dramatically increased the role of the Office of the Commissioner, banned the use of all steroids and androstenedione, subjected all minor players to three random tests each year, mandated individualized treatment for first offenders, required discipline for subsequent offenders and established confidentiality as a central tenant of the program. Last year, the Commissioner's Office spent more than $1,000,000 just on the testing component of the program. Even at this early stage, we believe this program has been effective in dealing with the steroid issue.

The fourth point in the Commissioner's initiative was to negotiate a steroid program applicable to Major League players. I say "negotiate" because drug testing is, of course, a mandatory topic of collective bargaining with the MLBPA. On behalf of the Commissioner and the Clubs, I made a comprehensive proposal on steroids to the MLBPA last March. That proposal would ban the use of steroids and androstenedione, would require three tests for all Major League players each year, would provide treatment programs for first offenders, would require discipline for the repeat offenders, would establish confidentiality as a central tenant of the program and would involve the participation of the MLBPA and its medical advisor in the administration on the program.

To date, we have received no substantive response from the MLBPA to our March proposal. We remain hopeful, however, that the MLBPA will come forward and address this issue in a meaningful way at the collective bargaining table. Over the long-term, an effective, confidential, treatment-based program including testing will be good for all players and the game.

(EXHIBIT B) STEROIDS AND NUTRITIONAL SUPPLEMENTS

Introduction

This pamphlet is intended to provide professional baseball players with information concerning the use, abuse, and potential adverse consequences of steroids, nutritional supplements and other substances believed to augment or enhance training routines or performance. No pamphlet, however, can serve as a substitute for personalized professional consultation. Consequently, no player should take any substances reported or claimed to improve training capacity, to increase strength and endurance, or to improve performance without first consulting his personal physician or a physician knowledgeable in these areas.

Steroids

A distinction has to be drawn between the kinds of steroids with which virtually every athlete is familiar, those designed to reduce inflammation, swelling or pain, and the kinds or steroids which are under discussion here, those designed to increase strength or muscle mass. The anti-inflammatory steroids are called *glucocorticosteroids*, and athletes are most familiar with them under the names of cortisone or prednisone. The steroids designed to increase muscle size and strength are called *anabolic androgenic steroids* (*AASs*). "Anabolic" indicates muscle building properties; "Androgenic" indicates masculinizing properties.

The prototypical AAS is testosterone, the hormone produced by the testes in men. Testosterone has two separate, but related, effects. One is the anabolic effect, which

is to build muscle size, lean body mass and body weight, which in turn may provide greater strength and speed. The other is its androgenic, or masculinizing effect, which accounts for normal male characteristics, including the distribution of facial and body hair, deep voice and reproductive and sexual function.

Testosterone is necessary for normal male structure and function. There are certain medical conditions in which testosterone may be prescribed by a physician, such as the failure to produce it in adequate amounts, which can lead to a variety of physical and emotional problems. Such use in professional athletes, however, is rare.

Also, administration of pure testosterone has not been useful as a medication or for muscle building or performance enhancement because the compound is rapidly metabolized and inactivated in the body. In the laboratory, however, testosterone has been altered in significant ways to prolong its effects and to increase its potency. For example, substitution of molecules in certain locations on the testosterone molecule renders the drug effective when administered by injection into muscle; substitution of another molecule in a similar position renders the drug resistant to inactivation by the liver and therefore orally effective. The drug Primobolan (testosterone enanthate) is effective for intramuscular use; the drug Metandren (methyl testosterone) renders it active by mouth. Other drugs such as Deca-Durabolin (Nandrolone) and Winstrol are synthetic analogues of testosterone (i.e. drugs developed in laboratories with action similar to testosterone). As the potency of the anabolic effects is increased, so are the potential and actual side effects of these preparations.

All AASs are controlled substances under federal law. The Anabolic Steroid Control Act of 1990 classifies AASs as Schedule III drugs, requiring a doctor's prescription for use. There are serious penalties for the illegal manufacture, distribution, and non-medically prescribed use of AAS. They also are prohibited in baseball. Beginning with the 2001 season, the Commissioner's Office will be undertaking in both the minor leagues and, in conjunction with the Players Association, at the major league level, steps intended to eliminate the prohibited use of steroids.

The regulation of AASs by the federal government predictably has led to their sale or distribution in a "black market." The result is that there are many AASs which either are unsafe because of the lack of testing and safety controls or are lawfully produced but, because they are secured illegally, lack appropriate labeling. Athletes have been known to utilize AASs which contain impurities, false dosages and have other particularly dangerous characteristics. Black market AASs should be avoided at every turn.

Since many of the unwanted adverse effects of the AASs are related to their androgenic (masculinizing) properties, attempts have been made to develop new chemicals that separate the anabolic effects from the androgenic effects. There appears, however, to be a common site of action (receptor) for the androgenic and anabolic properties of the AASs so that to date these attempts have not been successful. **The result is that athletes who take AASs for their anabolic properties, to increase lean body mass, strength or endurance, cannot avoid the undesired and often harmful androgenic properties of the steroid being taken.**

It is likely that athletes engaged in certain sports could derive greater benefit from AASs than other athletes. The dose and pattern of use vary between athletes and certainly between sports. For example, weight lifters, whose focus is on muscle mass and strength, probably would benefit from the use of high doses of AASs, whereas a fencer might derive less benefit or even negative results. Between the two, mixed results might be expected. In baseball, for example, the additional muscle mass associated with AASs presumably might enable batters to hit the ball farther, but the frequency with which the hitter might be able to do that might be undercut by the reduction in flexibility and adaptability that could be expected from increased muscle mass. **Also, since the increase in muscle mass associated with AAS use is not accompanied by a corresponding increase in tendon or ligament or joint size or strength, the risk of serious injury is increased. This is a major problem with the use of AASs.**

All AASs have harmful side effects, which vary with the particular AAS, its dosage, the method and frequency of its use, and the length of time over which it is used. Patterns of use include "stacking", which is the use of several compounds at the same time for their additive effects (some athletes have used up to eight compounds simultaneously) and "pyramiding," where the drugs are taken in cycles of increasing doses then decreasing doses with periods of no drug use. Other drugs are sometimes used to minimize the side effects of the AASs or withdrawal that may

occur when they are stopped. Some of the side effects are reversible, but others are not. The side effects may include:

Effects on the musculoskeletal system

Injuries are common among steroid users. As noted earlier, a principal reason for this is that the increase in muscle mass or increased speed associated with AAS use is not accompanied by a proportionate increase in the strength of tendons, ligaments or joints. In recent years, there is evidence that the frequency of injury in baseball players has increased and might be related to increased muscle mass and strength. More people have been on disability lists for longer periods of time. In fact, **AAS use may have an actual negative effect on tendons and ligaments, there being at least one study which showed that chronic use of steroids reduced tendon strength. Increased injury may also relate to the rapidity of weight gain, such as an athlete gaining 30 or 40 pounds in a period of time much too short for his body to adapt to such a significant increase in size, and thereby heightening the risk of injury.**

AASs cause the premature closing of the growing ends of bones in young people who are still growing. The persistence of growth of long bones varies among individuals though it would appear that anyone under the age of 19 may be at risk for stunting their growth with the use of these drugs. The height reducing effect of AASs in young people is irreversible. Unfortunately, young people often lack judgment and have a sense of invulnerability such that high doses of these drugs may be taken at early ages.

Effects on personality

It is well documented that AASs can cause a variety of mental changes, including irritability, excessive aggression, mania, paranoia, depression (frequently accompanied by suicidal thoughts), anxiety and panic. AAS use can also lead to psychological and physical dependence which makes it hard to curtail use, and dependent users have experienced a variety of withdrawal symptoms when attempting to stop using. A reasonably common problem in AAS users could be called "reverse anorexia" where they become fearful of not continuing to get heavier, more muscular and more masculine. This is a particularly dangerous property of AAS use, since **most of the unwanted side effects are more likely to occur the longer the use continues and the higher the dose taken.**

Hormonal and other effects

By a feedback mechanism, AASs suppress the normal production of testosterone in the body. A reduction in naturally produced testosterone can lead to decreased sperm production, with testicular atrophy, sexual problems and thyroid problems. High doses of AASs lead to male pattern baldness, acne, prostate enlargement, thyroid problems and a decrease in the high density lipoproteins (HDL), the so-called "good cholesterol," and an increase in the "bad cholesterol," the harmful low density lipoproteins (LDL). These changes can increase the risk of heart disease and stroke. AASs also cause salt and water retention, predisposing people to high blood pressure and heart failure.

In addition, when AASs and testosterone are metabolized by the body, they break down into female hormones. It is this feminizing effect of the high doses of AASs that accounts for the increase in breast size (gynecomastia) that male AAS users sometimes experience.

The adverse effects of the AASs relate also to the method of their administration. AASs are generally used orally or intramuscularly. If taken orally, most of the AAS is inactivated by the liver, resulting in an increased risk of decreased liver functions, liver tumors and cysts. **If, on the other hand, the AAS is taken by injection, the risks associated with needle use emerge, including HIV, hepatitis and other infections.**

Among the more commonly used AASs are:

Injectable AAS	Oral AAS
Deca-Durabolin (Nandrolone decanoate)	Anadrol–50 (Oxymetholone)
Depo-testosterone (Testosterone cypionate)	Anavar (Oxandrolone)
Delatestryl (Testosterone enanthate)	Dianabol (methandrostenealone)
Durabolin (Nandrolone phenpropionate)	Halotestin (Fluoxymesterone)
Primobolan (Metheneolone enanthate)	Maxibolin (Ethylestrenol)
	Metandren (methyltestosterone)

Injectable AAS	Oral AAS
	Nibil (methanalone acetate)
	Nilevar (norenthandorolone)
	Winstrol (Stanozolol)

Nutritional Supplements

There are a host of nutritional supplements on the market. They include vitamins, minerals, amino acids, plant derivatives, and other natural and synthetic substances, and they come in a variety of forms, including powders, tablets, and liquids.

All of the supplements claim to improve an athlete's sense of well being, strength or performance in one fashion or another. In assessing the utility of, and the risk of taking these supplements, however, an initial distinction should be drawn between supplements whose claims are based on the alleged capacity of the product to increase testosterone levels, and those that do not make such claims, but rather rely upon the particular properties of the supplement to allegedly enhance endurance or strength in some other way. Supplements which increase testosterone levels, if they really do that, are more fairly regarded as steroids.

Androstenedione and DHEA

In this latter class of nutritional supplements, the most common are those containing either DHEA (dihydroepiandrosterone) or androstenedione. Both effectively "become" testosterone because of the way testosterone is produced in the body. DHEA is a naturally occurring hormone which, through interaction with other chemicals in the body, converts into androstenedione. Androstenedione, in turn, by a similar process, converts into testosterone. The theory behind DHEA-based supplements is that they will produce more androstenedione, which eventually will increase the user's testosterone level. Predictably, the theory behind andro-based supplements is that they too will increase testosterone levels, and do so more directly than would be the case through an increase in DHEA levels.

Precisely because DHEA is one step further removed in the testosterone producing chain of reactions, the impact of supplements containing it is more speculative. Indeed, there has been very little scientific testing of such supplements. They are, nonetheless, quite expensive.

More is known about androstenedione, largely as a function of a study jointly sponsored by Major League Baseball and the Players Association. The baseball study came on the heels of another study which suggested that testosterone levels were not increased by administration of androstenedione. The baseball study, however, utilized dosage levels significantly above those recommended by the manufacturer, and increases in testosterone levels were found in the study's subjects. It is this finding, a major contribution to knowledge about androstenedione and about which the sport should be proud, that indicates that androstenedione, from a practical perspective, should be regarded as a steroid.

The reason androstenedione is not a regulated steroid appears to be simply a matter of timing. In 1994, Congress passed the Dietary Supplement Health and Education Act. This law gives nutritional supplement manufacturers greater freedom to market products as long as they do not claim to prevent, diagnose, treat or cure an illness or disease. The result was the emergence of innumerable nutritional supplements that were not subject to any stringent chemical analysis. Now that we know that at least some androstenedione-based products do increase testosterone levels, it may be time for the federal government to revisit whether such products should be placed alongside other steroids covered by the Anabolic Steroid Control Act.

As noted earlier, it appears that testosterone levels are only increased by administration of androstenedione when the manufacturer's suggested dosage is exceeded, yet, any time that is the case, there is increased risk of adverse side effects. Thus, a quandary related to use of such supplements: if the player takes androstenedione at the recommended level, he is unlikely to receive significant benefit; if, on the other hand, he exceeds the recommended level, he may achieve the muscle mass increase he seeks, but only at the expense of increasing the possibility of adverse side effects.

Finally, while andro-based supplements are purchasable over-the-counter and are legal to take, they are, for that very reason, readily available to young people. Seeking to improve athletic performance, they may take large doses at frequent intervals and put themselves at risk of serious side effects. Players may wish to keep this

in mind in determining the benefits and detriments of steroid-type nutritional supplements.

Creatine, Carnetine and other supplements

Many factors go into whether a player should take other nutritional supplements. These include the nature of the particular substance purporting to bestow the claimed effect ("what it is"), its concentration in the product available for sale ("how much of it is in the product"), its dosage, both suggested and actual ("how much does it say I should take; how much do I take"), and its purity ("how refined is it"). In addition, an individual's body chemistry is important, since no two individuals react exactly the same to any substance, including everyday foods and beverages.

Other factors may also play a role in determining what effect, if any, a nutritional supplement may have. They include whether the individual is taking other substances, including prescribed medicines, and the interaction between the supplement and those other substances; the time of day the supplement is taken; and even the expectation the player has about the effect the supplement will have on his training routine. Importantly, precisely because the effect of using a nutritional supplement will vary from individual to individual depending on such considerations, **players, in deciding whether to take a nutritional supplement, should not depend upon another person's experience with the substance.**

Common nutritional supplements available at health food stores, on the internet, at supermarkets or pharmacies are those containing ephedrine, caffeine, creatine, and various vitamins and minerals. The manufacturers' claims for many of these products often have little relationship to reality. Simple products available at relatively low cost are often quite expensive when marketed under different names and called a "dietary" or "nutritional supplement." It may be useful to ask a physician or trainer knowledgeable in these areas to comment on the various products.

Creatine

Athletes in a variety of competitive sports have used synthetic creatine supplements. The manufacturers of various creatine products have made extravagant claims for their products related to increase in energy, muscle mass and endurance. It is important to understand that the bases for many of those claims are marketing and advertising, and not the result of controlled scientific studies which can be substantiated. In the scientific literature, there are many conflicting reports concerning its effectiveness.

Creatine comes from three sources: the body is able to synthesize it; it is a natural substance found in food; and it can also be prepared synthetically. It is composed of three amino acids, *glycine*, *arginine* and *methionine* and is found in most protein rich foods, especially fish and meats. It is stored in muscle as creatine phosphate, a precursor of adenosine triphosphate, which is the immediate source of energy for muscle contraction. Most people consume approximately 1 to 2 grams of creatine in their daily diet, and produce similar amounts in their bodies, thus maintaining normal energy metabolism.

Creatine may be used in two ways: to enhance the burst of energy needed for short, intense activity, and as a training supplement. Creatine alone does not appear to increase muscle mass. By allowing people to train more intensely, however, it could allow for faster and more pronounced muscle growth and strength. On the other hand, there may be dangers associated with rapid muscle growth, which would put athletes at higher risk of injury. This issue requires further study.

Studies have shown that ingestion of large doses of synthetic creatine increases the level of creatine phosphate in the muscles which allows the sustaining of powerful muscular contractions and delaying fatigue. There appears to be an increase of short term energy for explosive muscle movements. This can be an asset in a workout regimen and may improve performance in short-term high intensity exercises such as sprints or laps. Other studies have shown, however, that sustained athletic performance and maximum oxygen uptake are not enhanced by creatine supplements. The medical literature also suggests that creatine does not enhance hand-eye coordination.

Creatine manufacturers recommend starting with a total daily loading dose of 10 to 20 grams a day for 5 days, followed by a total daily maintenance of 2–5 grams per day. Increasing the dosage will *not* increase the positive effects. As with other substances, there is a direct correlation between excessive dosage and the risk of side effects.

Although manufacturers of creatine state that it is safe to use; there are no carefully controlled studies on either effectiveness or side effects. Overuse of the drug may put excessive strain on the liver and kidneys. It may also cause acute and severe diarrhea. It is essential that adequate amounts of fluids be taken with creatine,

since creatine is excreted by the kidneys. Inadequate fluid can lead to dehydration and muscle cramping.

There is very little information available about the manufacture and purity standards of creatine, nor have the effects of its interaction with other supplements or medications been adequately studied. Since use of creatine is a recent phenomenon, long-term studies are obviously unavailable. Athletes with kidney disease or other health problems should not take creatine without physician supervision.

Carnitine

Carnitine is a combination of two essential amino acids, *lysine* and *methionine*. It is a normal part of the body's metabolism and is used in the oxidation of amino acids. It also decreases the levels of lactic acid in muscles during exercise. In athletes, normal carnitine levels drop during intense exercise. Supplements containing carnitine are intended to replace the natural carnitine that is lost. Care must be taken, however, in the type of carnitine used. There are two forms, the dextro and the levo ("d" and "l"). Most nutritional supplements are a combination of the two and are labeled "dl-carnitine" or "racemic carnitine". Only the l-form is active and effective. The body cannot use the d-form, and its presence may actually cause a deficiency in effective carnitine levels

Ephedrine

Ephedrine is a stimulant that is available without a prescription in a variety of nutritional supplements that purport to improve performance and/or decrease appetite. It is extracted from a Chinese herb variously called *Ma Huang* or *Ephedra*. In this form it has also been known as *herbal ecstasy*. Performance increases may occur with these drugs in the short-term, particularly when performance has been compromised by fatigue or lack of sleep. Increased doses generally do not lead to enhanced performance. There have been a number of severe side effects reported related to the drug, including high blood pressure, rapid heart rate, seizures, strokes, heart attacks and death. Ephedrine is also associated with psychological side effects such as increased irritability, anxiety, tremors, paranoia and, in rare instances, a complete break with reality. The psychological effects of the drug often severely impair performance. These drugs can be associated with severe dependency or addiction, such that the acquisition and use of the chemical becomes an overriding concern of living. Commercial preparations containing ephedrine include "Ripped Fuel," "Ultimate Orange" and "Metabolife," which also contain large amounts of caffeine.

St. John's Wort

Although not advertised as an antidepressant, in order to retain its status as a nutritional supplement, St. John's Wort is an herbal preparation believed to be effective in mild depression, anxiety or insomnia. It is generally taken in doses of 300 mg, three times a day. The side effects are relatively mild, but include photosensitivity, a heightened skin and eye sensitivity to the sun which may be of importance to baseball players. It also causes gastrointestinal problems in some people.

Other Substances Claimed to Improve Performance

Human Growth Hormone (HGH)

HGH is a hormone produced by the pituitary gland that is responsible for normal growth and development. It is used as a medication to treat children who are deficient in the hormone as well as those whose height is significantly below normal. Rumor and anecdotal information have created the idea that the drug is potent and associated with few side effects as an anabolic agent. Athletes have used it for its anabolic properties and it is much sought after and extremely expensive. It may increase fat-free mass and total body water, but it does not appear to increase muscle size, strength or performance. It originally was extracted from the pituitary gland of cadavers, and was associated with a number of deaths probably related to an infectious agent similar to that which causes "Mad Cow Disease." Currently the hormone is synthesized in laboratories. There is also a large amount of counterfeit HGH, for example vials labeled *Lilly Humatrope* that actually contain other materials, such as human chorionic gonadotropin (see below).

Human Chorionic Gonadotropin (HCG)

HCG is a naturally occurring hormone produced by the placentas in pregnant women. It is the basis for most pregnancy tests and is used in the treatment of infertility. In men, HCG stimulates production of testosterone in the testes. Athletes often use HCG during or after high doses of AASs to reduce side effects such as testicular atrophy or to avoid the crash after cessation of the AAS use. HCG can also cause side effects similar to the AASs, such as male breast growth, acne, mood

swings and high blood pressure. In young athletes, HCG, like the AASs, can cause stunting of growth.

Erythropoietin (EPO)

EPO is a naturally occurring molecule that regulates red blood cell production. It has been synthesized to be used medically in order to treat a number of anemias. It could enhance performance and endurance in certain sports, but little confirming data is available. It is the drug that has been implicated in the bicycle racing doping scandals because of its capacity to increase the oxygen-carrying capacity of the blood and the delivery of more oxygen to muscle. It has the potential for serious and even fatal side effects, such as stroke and heart attack.

Conclusion

This report was developed to give you a greater understanding of the nature, benefits, if any, and risks associated with the use of products claimed to improve your capacity to train or perform as a professional baseball player. No pamphlet, of course, can provide you with all the information you need to know, nor with important developments that may take place after its publication. There is, therefore, as mentioned at the outset, simply no substitute for professional consultation in conjunction with your training regimen.

Professional baseball players are subject to intense pressure to perform. Because of this pressure, it is not surprising that some will look for an edge where they hear one may be found, and the claims of steroid and supplement manufacturers can be loud indeed. But, given the increasing evidence of the potential for severe, even career ending, injuries, the many side effects, and the unpredictability of the results that have come to be associated with such substances, athletes must be extremely careful with what substances they use.

If you have concerns or questions on this subject, we encourage you to talk with a qualified professional. It may be a private consultant, your team doctor, your trainer, a representative of your Employee Assistance Program, or any other qualified professional in whom you have confidence. Such contacts should be private and confidential. Please feel free, also, to consult at any time with Joel Solomon, M.D., the Medical Advisor to the Major League Baseball Players' Association, at (212) 595–9119, or Robert B. Millman, M.D., the Medical Advisor to the Office of the Commissioner, at (212) 746–1248, and to seek from them any further information you desire regarding this important subject.

(EXHIBIT C) MAJOR LEAGUE BASEBALL'S MINOR LEAGUE DRUG PREVENTION AND TREATMENT PROGRAM

The Major League Baseball Minor League Drug Prevention and Treatment Program (the "Program") has been established to prevent and end the use of Prohibited Substances (defined in Section 2 below) by non 40-man roster Minor League players. The Office of the Commissioner has concluded that the use of Prohibited Substances is potentially hazardous to a Player's health and may create an unfair competitive advantage on the playing field.

1. Health Policy Advisory Committee

A. Minor League Health Policy Advisory Committee Members

The Minor League Health Policy Advisory Committee ("MLHPAC") is responsible for administering and overseeing the Program. MLHPAC shall be composed of the Office of the Commissioner's medical representative ("Medical Representative") and two other representatives (with at least one representative being a duly licensed attorney).

B. Appointment and Removal of MLHPAC Members

The respective representatives shall be appointed and removed by the Office of the Commissioner's Executive Vice President of Labor Relations and Human Resources and such representatives shall not serve a minimum term.

C. Duties and Responsibilities of MLHPAC

MLHPAC shall have the following duties and responsibilities:

1. Establish advisory groups as it deems necessary to the effective administration of the Program, provided that no such advisory group may incur any extraordinary expenses without the approval of the Office of the Commissioner;
2. Prepare and undertake educational presentations supporting the objectives of the Program;

3. Administer the Program's testing requirements;
4. Establish uniform guidelines or requirements for Clubs' Employee Assistance Programs ("EAPs") and monitor the performance of all such EAPs;
5. Conduct investigations;
6. Determine a Player's placement on either the Clinical or Administrative Track;
7. Create, or participate in creating, individualized programs for Players on the Clinical or Administrative Track ("Treatment Programs");
8. Monitor and Supervise Players' Treatment Program progress.
9. Establish, monitor, maintain and supervise the collection procedures and testing protocols set forth in Addendum A hereto;
10. Review periodically the operation of the Program and make recommendations to the Office of the Commissioner for appropriate amendments; and
11. Take any and all other reasonable actions necessary to ensure the proper administration of the Program.

2. Drugs of Abuse and Steroids

All non 40-man roster Minor League Players shall be prohibited from using, selling (or helping to sell) or distributing (or helping to distribute) any Drug of Abuse and/or Steroid (collectively referred to as "Prohibited Substances").

A. Drugs of Abuse

Any and all drugs or substances included on Schedules I and II of the Code of Federal Regulations' Schedule of Controlled Substances, as amended from time to time, shall be considered a Drug of Abuse covered by the Program. The following is a non-exhaustive list of Drugs of Abuse covered by the Program:

1. Amphetamine and its analogs
2. Cocaine
3. LSD
4. Marijuana
5. Opiates (Heroin, Codeine, Morphine)
6. Phencyclidine ("PCP")
7. MDMA ("Ecstasy" or "X")
8. GHB
9. Alcohol [1]

B. Steroids

Any and all anabolic androgenic steroids included on Schedule III of the Code of Federal Regulations' Schedules of Controlled Substances (Schedule III) shall be considered a Steroid covered by the Program. Anabolic Androgenic steroids that are not included on Schedule III but that may be illegally obtained are also prohibited. The following is a non-exhaustive list of Steroids that are prohibited:

1. Bolasterone
2. Bolderone
3. Clenbuterol
4. Clostebol
5. Dehydrochlormethyltestosterone
6. Dromostanolone
7. Ethylestrenol
8. Furarebol
9. Mesterolone
10. Methandienone
11. Methandriol
12. Methenolone
13. Mibolerone
14. Nandrolone
15. Oxymacaterone
16. Stanazolol
17. Trenbolone

Androstenedione shall also be deemed a Steroid covered by the Program despite the fact that it is not included on Schedule III.

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[1] A Player will only be required to enter the Administrative Track (or the Clinical Track) for alcohol-related reasons if his consumption of alcohol and/or habitual use of alcohol is or may be problem for the Player.

C. Adding Prohibited Substances to the Program

MLHPAC shall have the right to add a Prohibited Substance to this Section 2.

3. Random Testing

A. Drugs of Abuse

1. In addition to the testing set forth in Section 4 below, all non 40-man roster Minor League players will be subject to up to three random tests per year for the use of any Drug of Abuse.
2. If a Player tests positive for any Drug of Abuse, he shall immediately enter the Administrative Track and shall be subject to the discipline set forth in Section 9.

B. Steroids

1. In addition to the testing set forth in Section 4 below, all non 40-man roster Minor League players will be subject to up to three random tests per year for the use of Steroids.
2. If a Player tests positive for any Steroid, he shall immediately enter the Administrative Track and shall be subject to the discipline set forth in Section 9.

C. Collection Procedures

All Program testing shall be conducted in compliance with the Collection Procedures set forth in Addendum A hereto.

D. Positive Test Results

Any test conducted under the Program will be considered "positive" for either a Drug of Abuse or Steroid under the following circumstances:

1. If any substance identified in the test results meets the levels set forth in the Testing Protocols section of Addendum A hereto.
2. A Player fails or refuses to take a test pursuant to Section 3 or 4, or refuses to cooperate with the testing process.
3. A Player attempts to substitute, dilute, mask or adulterate a specimen sample or in any other manner alter a test.
4. The determination of whether a test is "positive" under Section 3.D.2 and 3.D.3 shall be made by MLHPAC.

E. Notification

MLHPAC shall immediately notify the Player and the Club's representative and EAP of a positive result from a test conducted pursuant to Section 3 or 4.

4. Reasonable Cause Testing

In the event that any MLHPAC member has information that gives him/her reasonable cause to believe that a Player has, in the previous year, engaged in the use, possession or distribution of a Prohibited Substance, such member shall immediately request a meeting (or conference call) to present such information to the other MLHPAC members. Upon hearing the information presented, MLHPAC may either immediately determine if there is reasonable cause to believe that the Player has engaged in the use, possession, or distribution of a Prohibited Substance or MLHPAC may conduct a prompt investigation to ascertain additional facts ("Investigation"). If MLHPAC determines that such reasonable cause exists, the Player will be subject to immediate testing in accordance with the procedures and protocols set forth in Addendum A hereto.

If the Player tests positive for a Prohibited Substance, he will be placed on the Administrative Track and will be subject to discipline under Section 9.

5. Clinical and Administrative Tracks

A. General

Any Player referred to MLHPAC shall be placed on either the Clinical Track or the Administrative Track.

B. Clinical Track

1. A Player will be placed on the Clinical Track only through his voluntarily coming forward to either MLHPAC or his Club ("Voluntary Self-Referral") and stating that he would like assistance in attempting to stop using any Prohibited Substance. Voluntary Self-Referral shall also include any situation where the Club suggests to the Player that he seek assistance from either MLHPAC or the Club's EAP, and the Player voluntarily agrees to such assistance.
2. While a Player remains on the Clinical Track, any and all information relating to the Player's involvement in the Program, including but not limited to

Prohibited Substance testing and Treatment Program progress, shall be disclosed only to MLHPAC and the Club's EAP who shall keep such information confidential. MLHPAC and/or EAPs will be under no obligation from either the Office of the Commissioner or any Club to disclose any information regarding a Player on the Clinical Track.

3. A Player shall not be subject to discipline while he is on the Clinical Track, except as set forth in Section 5.B.4.

4. A Player will be removed from the Clinical Track and placed on the Administrative Track under the following circumstances: (i) Player does not comply with his Treatment Program; or (ii) any of the conditions of Administrative Track placement occurs. A Player will not be subject to discipline, other than being moved to the Administrative Track, for failing to comply with his Treatment Program while on the Clinical Track (including testing positive for a Prohibited Substance). A Player will be subject to immediate discipline if, while on the Clinical Track, the Player is convicted or pleads guilty (including a plea of *nolo contendere* or a similar plea) to the sale or use (including a criminal charge of conspiracy or attempt to possess, use or distribute) of any Prohibited Substance.

C. Administrative Track

1. A Player will be placed on the Administrative Track if any one of the following occur: (i) MLHPAC determines that Player should enter Clinical Track but Player refuses Voluntary Self-Referral; (ii) Club and/or MLHPAC believe that Player poses a threat to the safety of himself or others and Player refuses Voluntary Self-Referral; (iii) Player is convicted or pleads guilty (including a plea of *nolo contendere* or a similar plea) to the use (including a criminal charge of conspiracy or attempt to possess, use or distribute) of any Prohibited Substance; (iv) Player is involved in the sale or distribution of a Prohibited Substance; (v) Player tests positive under the Program for any Prohibited Substance; or (vi) Player does not comply with his Clinical Track Treatment Program.

2. While a Player remains on the Administrative Track, information relating to the Player's involvement in the Program, including but not limited to Prohibited Substance testing and Treatment Program progress, shall be disclosed to MLHPAC, the Player's EAP and a designated representative from the Player's Club. Any information disclosed shall remain completely confidential. Notwithstanding the foregoing, if a Player is suspended pursuant to Section 9 below, the transaction shall be entered in the Baseball Information System as a suspension for a specified number of days for a violation of this Program. Moreover, the only public comment from the Club or the Office of the Commissioner shall be the fact that the Player was suspended for a specified number of days for a violation of the Program. MLHPAC is permitted, without the Player's consent, to disclose the Player's Treatment Program progress to the General Manager of the Player's Club, who shall keep such information confidential, except as set forth in section 8 below.

3. A Player on the Administrative Track is subject to discipline under Section 9.

6. Player Evaluation

A. Initial Evaluation

1. A Player who is referred to MLHPAC (either through a positive test result or through Voluntary Self-Referral) will receive an evaluation from MLHPAC's Medical Representative or the Club's EAP (the "Initial Evaluation"). The purpose of the Initial Evaluation is to ascertain the type of Treatment Program that, in the opinion of the Medical Representative and the EAP, would be most effective for the Player involved. The Initial Evaluation shall include at least one meeting with the Player and either the Medical Representative or the EAP. After the first meeting, the Medical Representative and/or the EAP may determine that additional meetings and/or a medical examination, including a toxicology examination, is necessary to complete the Initial Evaluation.

2. A Player shall be required to sign a consent form to receive medical treatment and for the release of his medical records. A Player who is on the Administrative Track shall also be required to sign a release so that his club may provide any Club who is interested in acquiring such Player's contract with information regarding the Player's Treatment Program progress.

B. Treatment Program

After concluding the Initial Evaluation and consulting with MLHPAC, the Medical Representative and the EAP shall prescribe a Treatment Program for the Play-

er. In devising the Treatment Program, the Medical Representative and the EAP may consult with independent experts but, in doing so, may not divulge the Player's name. The Treatment Program may include any or all of the following: counseling, in-patient treatment, outpatient treatment and follow-up testing. The Medical Representative or the EAP must inform the Player of the initial duration of the Treatment Program. During the course of the Player's Treatment Program, the Medical Representative and the EAP may change the duration (either longer or shorter) and the scope of the Treatment Program, depending on the Player's progress. The EAP shall forward monthly Treatment Program Progress Reports (attached hereto as Addendum B) to MLHPAC for any Player on either the Clinical or Administrative Track.

7. Confidentiality of Evaluations and Treatment Programs

The confidentiality of the Player's participation in the Program is essential to the Program's success. The Office of the Commissioner, MLHPAC, Club personnel, and all of their members, affiliates, agents consultants and employees, are prohibited from publicly disclosing information about the Player's Initial Evaluation, diagnosis, Treatment Program (including whether a Player is on either the Clinical or Administrative Track), prognosis, test results or compliance.

8. Disclosure of Player Information

A. Disclosure of Information

1. A Club whose Player is on the Clinical Track is prohibited from disclosing any information regarding a Player's participation in the Program to either the public, the media or other Clubs. Notwithstanding this prohibition, a Club is permitted to discuss a Player's Treatment Program progress with another Club that is interested in acquiring such Player's contract if the Club receives the Player's prior written consent.

2. A Club whose Player is on the Administrative Track must disclose information regarding a Player's participation in the Program to a Club that is interested in acquiring such Player's contract in an assignment.

B. Method of Providing Information

Any information provided pursuant to this Section 8 must be relayed to the management of the acquiring Club via a conference call with at least one MLHPAC Representative or the EAP overseeing the Player's Treatment Program on the conference call. The acquiring Club's management shall keep any information that it obtains confidential.

9. Discipline

Other than as provided in Section 9.D below, only players on the Administrative Track shall be subject to discipline.

A. Player Fails to Comply with Treatment Program

1. If MLHPAC determines that a Player failed to comply with his Treatment Program while Player is on the Administrative Track, Player shall be subject to the following discipline:

(a) First offense: at least a 3-game, but no more than a 15-game, suspension and up to a $1,000 fine;

(b) Second offense while on same Treatment Program: at least a 15-game, but no more than a 30-game, suspension and up to $5,000 fine;

(c) Third offense while on same Treatment Program: at least a one-year suspension and up to $10,000 fine;

(d) Fourth offense while on same Treatment Program: permanent suspension from Baseball.

2. All suspensions shall be without pay.

B. Player Tests Positive for Prohibited Substance

1. A Player who tests positive for a Prohibited Substance shall immediately enter the Administrative Track;

2. A Player who tests positive for a Prohibited Substance for a second time in his Minor League career shall receive at least a 3-game, but no more than a 15-game, suspension and up to a $1,000 fine;

3. A Player who tests positive for a Prohibited Substance for a third time in his Minor League career shall receive at least a 15-game, but no more than a 30-game, suspension and up to a $5,000 fine;

4. A player who tests positive for a Prohibited Substance for a fourth time in his Minor League career shall receive a one-year suspension from Minor League

Baseball and up to a $10,000 fine. Player must establish that he has successfully completed a Treatment Program before he is permitted reinstatement.

5. A player who tests positive for a Prohibited Substance for a fifth time in his Minor League Career shall be permanently suspended from Minor League Baseball.

6. All suspensions shall be without pay.

C. Removal from Clinical or Administrative Track

MLPHAC shall have the discretion to remove Player from either the Administrative or Clinical Track if a Player does not test positive for a Prohibited Substance in a one-year period and/or if Player successfully completes his Treatment Program.

D. Conviction for the Use or Sale of Prohibited Substance

1. Conviction for Use of Prohibited Substance

A Player who is convicted or pleads guilty (including a plea of *nolo contendere* or a similar plea) to the use of a Prohibited Substance (including a criminal change of attempt to possess or use) shall receive at least a 15- 30 game suspension and up to $1,000 fine. A Player's second conviction for use of a Prohibited Substance shall result in a 30–60 game suspension and up to a $5,000 fine. A Player's third conviction for use of a Prohibited Substance shall result in a one-year suspension from Baseball and up to a $10,000 fine. A Player's fourth conviction for use of a Prohibited Substance shall result in a permanent suspension from Baseball.

2. Conviction for the Sale or Distribution of a Prohibited Substance

A Player who is involved in the sale or distribution of a Prohibited Substance shall receive at least a 60–90 game suspension and up to a $10,000 fine. A Player who is involved in the sale or distribution of a Prohibited Substance for a second time during his Minor League career shall be permanently suspended from Baseball.

10. Costs of the Program

Any costs for the treatment and testing of Players on either the Clinical Track or the Administrative Track shall be covered by the Club holding title to the Player's contract. Any costs relating to MLHPAC shall be covered by the Office of the Commissioner.

Addendum A

Collection Procedures

All Collectors must adhere to the following collection procedures:

1. Collector must ask donor for photo identification. If the donor does not have ID, Collector will indicate this on the Group Collection Log and have a club management representative (*e.g.*, trainer, coach) positively identify player.

2. Have donor sign in on the Group Collection Log.

3. Enter donor's social security number in the Donor Information box on the Chain of Custody.

4. Ask donor to select a wrapped/sealed collection kit.

The Collection Shall Be Directly Observed By A Male Collector

5. Have donor provide a urine specimen. After the donor voids, the donor, not Collector, must carry the sample to the processing table. Collector must not handle the specimen at all until Collector pours it into the "A" and "B" bottles (*see* Paragraph 9 below).

6. Determine if there is sufficient urine for testing. A minimum of 60ml of urine must be collected.

7. If the donor is unable to void, Collector must call CDT after 2 hours for further instructions. Under no circumstances should the donor leave the facility without giving a specimen unless instructed to do so by CDT.

8. Temperature should be read within 4 minutes of collection. Determine if urine temperature is within normal range. (90 to 100 °F)

A. If temperature is normal, check "Yes" Box.

B. If temperature is NOT within normal range, check "No" box. Record temperature in adjacent space and process the sample as you would a normal specimen. NOTE: Problem Collection Log must be completed.

1. Inform the donor that he must give a second specimen.

2. Prepare a second Chain-of-Custody form for the second Sample.

3. Inform the donor that *both specimens will be submitted to the laboratory for testing.*

9. Collector pours sample from disposable specimen cup into specimen bottles: Collector must tell the donor the following:

"Reserve a Small Amount in the Cup"

Collector shall split this specimen as follows: 45ml in "A" bottle and 15ml in "B" bottle. Note: If less than 60ml is collected discard the entire specimen in the donor's presence. Begin again with another sealed kit in order to collect the 60ml. **Note: Problem Collection Log must be completed.**

Collector must tell the donor the following:

"You must watch me as I pour the sample into the bottles and seal them."

10. Place bottle caps on specimen bottles. Ensure that caps are on tight to prevent leakage.
11. Complete the *bottle custody seals* for the "A" and "B" samples as follows:
Ask the donor to verify that the specimen ID numbers on the top right side of the chain-of-custody form match those on the security seals.
12. Peel the back off the bottle custody seals and place over the bottle caps and down the sides of the bottles.
Have donor initial and date the security seal.
13. Check the specific gravity of the urine remaining in the cup, and record the findings on the chain of custody.
• Specific Gravity must be 1.010 or higher.
If the specimen does not meet these standards, it will be processed anyway and the donor shall be required to provide additional specimens until these requirements are met. **Only the sample meeting these requirements will be sent for testing along with the first sample.** Collector shall make a notation on Problem Collection Log.
14. Read the Donor Certification statement *aloud* to the donor, in the DONOR AFFIDAVIT section of the Chain-of-Custody form:

"I certify that the specimen(s) sealed with the above specimen ID number was provided by me on this date and the specimen(s) has not been altered."

After Collector has read this statement to the donor, player must sign and date form.

15. Collector shall read and sign the COLLECTOR AFFIDAVIT (bottom of page). Collector shall print his name, date of collection and time of collection.
16. Collector shall ask the donor if he has taken any medications within the last 30 days and, if so, will enter such information in the "MEDICATIONS" section. The donor will be informed that know that this information is not required.
17. Place specimen bottles in the front pocket and copy 2 of the Chain-of-Custody form inside the rear pocket of the specimen bag.
18. Initial and date the bag custody seal.
19. Place the seal over the sealed "flap" of the bag.
20. Give copy to the donor.
21. Store specimen in locked or secure storage until pickup. In the event of a weekend collection and the sample cannot be sent until Monday, the specimen should be stored in a refrigerated, locked area.

Testing Protocols

Drugs of Abuse

Drugs	Initial Test Level (ng/mL)	Confirmation Test Level
Ethanol (Alcohol)	0.02%	0.02%
Amphetamines	1000	500
Cocaine Metabolites	300	150
Opiates/Metabolites	2000	2000
Phencyclidine (PCP)	25	25
Cannabinoids	50	15
Nandrolone	2	2

Steroids

A test will be considered positive if any Steroid as defined in Section 2.B of the Program is present.

ADDENDUM B

TREATMENT PROGRAM PROGRESS REPORT

Date:_____

Player Name:_____

EAP Name:_____

Club:_____

Date Player Entered Treatment Program:_____

Basis for Entering Treatment Program:

_____
_____
_____

Player History:

_____
_____
_____

Description of Treatment Program Prescribed:

Counseling:_____

_____

_____

In-Patient Treatment:_____

_____

_____

Out-Patient Treatment:_____

_____

_____

Follow-Up Testing:_____

_____

Treatment Program Progress:

Counseling:_____

_____

_____

In-Patient Treatment:_____

_____

_____

Out-Patient Treatment:_____

_____

_____

Follow-Up Testing:_____

_____

Senator DORGAN. Mr. Manfred, thank you very much.

Next we will hear from Jerry Colangelo, who is the chairman of AZBP Limited Partnership, the ownership group for the Arizona Diamondbacks. Mr. Colangelo, welcome, and thank you for being here.

STATEMENT OF JERRY COLANGELO, MANAGING GENERAL PARTNER, ARIZONA DIAMONDBACKS

Mr. COLANGELO. Thank you, Senator.

Mr. Chairman and Members of the Committee, thank you for this opportunity to appear before you today to discuss an issue of great concern to me, as an owner of a major league club and as a fan of baseball: the increasing prevalence of steroids in Major League Baseball.

I am fortunate enough to have been involved in baseball since 1998, when the Arizona Diamondbacks were admitted to the National League as an expansion team. Last season, I experienced the ultimate thrill in all of professional sports, watching my team win perhaps the most exciting World Series in baseball history. That win was a tremendous boost for the State of Arizona and generated terrific publicity for our sport.

Unfortunately, in recent weeks, baseball has been forced to endure a spate of negative publicity as a result of revelations of steroid use by two former players. These comments suggest that steroid use is prevalent in baseball and on the increase. I believe this trend must be stopped and reversed for two principal reasons—one, to protect the players safety and health, and, two, to protect the integrity of the game.

First, it is my understanding that players who use steroids risk serious health consequences, such as increased likelihood of injury, high blood pressure, high cholesterol, hypertension, depression, and even infertility. Major League Baseball should do everything within its power to discourage players from taking these risks.

Major league players make it to this elite playing field because of their unwavering commitment and desire to win. As an all-state high school and an All-Big-Ten basketball player for the University of Illinois, I understand and appreciate this desire to compete and succeed. Indeed, it is this desire to succeed that produces greatness.

Unfortunately, some players' desire is so strong that they are willing to take steroids in an effort to get an edge over other players. They do this in spite of the negative consequences that may result from using steroids. This conduct, at the major league level, has the inevitable domino effect of forcing other baseball players, in both the major and minor leagues, to engage in the same conduct. In fact, many players believe that without this same edge, they may be placed at a competitive disadvantage as compared to other players.

My purpose here is not to blame the players for this conduct. Instead, my purpose is to shed light on a problem that can be remedied and to encourage all those involved to work together to do so.

As Rob Manfred discussed, Major League Baseball has done everything possible, everything that is possible to do without the

Players Association's consent, to prevent and end steroid use. We believe, however, that more needs to be done.

Based on my experience as an owner of the Phoenix Suns, a team in the National Basketball Association, the implementation of a comprehensive, mandatory steroid testing program would go far towards addressing this serious problem. Unlike Major League Baseball, the NBA has a mandatory steroid testing program in place for its first year and veteran players, which was agreed to by the National Basketball Players Association. This testing program is set forth in the parties' 1999 collective bargaining agreement.

Pursuant to the NBA's testing program, each first-year player is subject to up to 4 unannounced steroid tests per year, and each veteran player is subject to 1 unannounced steroid test per year. It is my opinion that the NBA's testing program has been instrumental in discouraging players from using these dangerous and illegal substances.

We are hopeful that baseball will have a mandatory steroid testing program in the near future. Such a program would be a necessary and fundamental step in the direction of ridding steroid use in Major League Baseball.

And, in summary, when I see the cartoons, the editorials, the columns that attack the credibility of our players, we have a serious problem. I've very concerned about the health, as I said earlier, both short term and long term. And this is everyone's issue. It's not an owners' issue, it's not a Players Association issue. It's an issue that we must deal with collectively. When you look at the economic impact, in terms of the loss of millions of dollars, that's serious.

And enough can't be said about the role-model influence that players have. Our fans are being affected. They're questioning the athletes themselves.

And so I would urge that the Players Association recognize that this is not an "if" or a "maybe." This is a must—something that must be done, for all the appropriate reasons.

Thank you.

[The prepared statement of Mr. Colangelo follows:]

PREPARED STATEMENT OF JERRY COLANGELO, MANAGING GENERAL PARTNER, ARIZONA DIAMONDBACKS

Mr. Chairman and Members of the Committee, thank you for this opportunity to appear before you today to discuss an issue of grave concern to me as an owner of a Major League Club and as a fan of Baseball—the increasing prevalence of steroids in Major League Baseball.

I am fortunate enough to have been involved in Baseball since 1998 when the Arizona Diamondbacks were admitted to the National League as an expansion team. Last season, I experienced the ultimate thrill in all of professional sports—watching my team win perhaps the most exciting World Series in Baseball history. That win was a tremendous boost for the State of Arizona and generated terrific publicity for our sport.

Unfortunately, in recent weeks, Baseball has been forced to endure a spate of negative publicity as a result of revelations of steroid use by two former players. These comments suggest that steroid use is prevalent in Baseball and on the increase. I believe this trend must be stopped and reversed for two principal reasons: one, to protect the players' safety and health; and two, to protect the integrity of the game.

First, it is my understanding that players who use steroids risk serious health consequences, such as increased likelihood of injury, high blood pressure, high cholesterol, hypertension, depression and even infertility. Major League Baseball should do everything within its power to discourage players from taking these risks.

Major League players make it to this elite playing field because of their unwavering commitment and desire to win. As an All-State high school and an All-Big Ten basketball player for the University of Illinois, I understand and appreciate this desire to compete and succeed. Indeed, it is this desire to succeed that produces greatness.

Unfortunately, some players' desire is so strong that they are willing to take steroids in an effort to get an "edge" over other players. They do this in spite of the negative consequences that may result from using steroids. This conduct at the Major League level has the inevitable domino effect of forcing other baseball players in both the Major and Minor Leagues to engage in the same conduct. In fact, many players believe that, without this same "edge," they may be placed at a competitive disadvantage as compared to other players.

My purpose here is not to blame the players for this conduct. Instead, my purpose is to shed light on a problem that can be remedied and to encourage all those involved to work together to do so. As Rob Manfred discussed, Major League Baseball has done everything possible—everything that is possible to do without the Players Association's consent—to prevent and end steroid use. We believe, however, that more needs to be done.

Based on my experience as an owner of the Phoenix Suns, a team in the National Basketball Association, the implementation of a comprehensive, mandatory steroid testing program would go far towards addressing this serious problem. Unlike Major League Baseball, the NBA has a mandatory steroid testing program in place for its first year and veteran players, which was agreed to by the National Basketball Players Association. This testing program is set forth in the parties' 1999 collective bargaining agreement.

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We are hopeful that Baseball will have a mandatory steroid testing program in the near future. Such a program would be a necessary and fundamental step in the direction of ridding steroid use in Major League Baseball.

Senator DORGAN. Mr. Colangelo, thank you very much.

Next we will hear from Donald Fehr, executive director and general counsel for the Major League Baseball Players Association. Mr. Fehr, welcome. You may proceed.

STATEMENT OF DONALD M. FEHR, EXECUTIVE DIRECTOR, MAJOR LEAGUE BASEBALL PLAYERS ASSOCIATION

Mr. FEHR. Thank you, Mr. Chairman.

My name is Donald M. Fehr, and I'm privileged to serve as the executive director of the Major League Baseball Players Association, a position I've held for more than 15 years now. The MLBPA is the exclusive collective bargaining representative of all major league players, and I appear here today in response to the committee's invitation to testify.

As the Chairman indicated, there were a number of current major league players that were also invited to testify. Due to the pressures of the schedule—we don't have off days in baseball that amount to anything—it was impossible for them to appear, and I trust that the Committee will understand.

First, we appreciate the Committee's interest in and concern about the recent reports of the use of illegal steroids in Major League Baseball which has led to this hearing and which has prompted the comments made by the three Senators that we heard from as the hearing began.

Let me be clear, on behalf of myself and my entire membership. The Major League Baseball Players Association neither condones nor supports the use by players or by anyone else of any unlawful

substance, be it steroids or otherwise, nor do we support or condone the unlawful use of any legal substance. I cannot put it more plainly. Both the use of any illegal substance and the illegal use of any lawful substance are wrong.

As the Members of the Committee know, and as was reflected in the opening statements this morning, and as Mr. Manfred and Mr. Colangelo have mentioned, we are currently engaged in the process of negotiating new collective bargaining agreements with the major league clubs covering terms and conditions of employment for major league players. It's no secret that collective bargaining in baseball is sometimes a difficult process. That certainly has been the history. But it is also clear, as has been mentioned, that the appropriate venue in which these issues will be addressed is within that process. And it is certainly my hope and that of my membership that, before too much longer, we will be able to reach a just, fair, and effective agreement with the owners on all of the issues which divide us, certainly including the ones that brought us to this hearing today.

As it happens, I was scheduled to begin to make a trip to see all of my members for the purpose of discussing collective bargaining. While all the meetings aren't scheduled yet, the first one, as it happens, takes place tomorrow morning in Montreal. And I can assure the Members of the Committee that these issues will receive serious and thoughtful discussion in those meetings. And I think it goes without saying that the recent publicity and the interest of this Committee will help to spur that process.

Additionally, however, as I think is also clear, we are not engaged in the process of collective bargaining here, and I will not be doing that.

I also appreciate very much the Chairman's comments that we will not be discussing individuals here. That's difficult to do, and I certainly believe that's the appropriate course.

Let me further correct what may be a misimpression. If one were simply to pay attention to cursory sound bites or sensational magazine covers or some of the other press coverage that we've seen, one might believe that Major League Baseball and the Players Association have no substance use or abuse program, have not cooperated together, have not thought about these issues, have not considered what to do, or, if we have such a program, if we have thought about these things, if we have considered what to do, that it bears no reference to steroids. As Mr. Manfred has indicated, that clearly is not the case.

For a long time, the Players Association and the clubs have worked together with medical professionals that we jointly appoint to develop programs which are directed and administered by those physicians. Those programs have a testing component, based upon reasonable cause to believe that a player has engaged in misconduct or other activity affecting his ability to play.

With respect to steroids, the views of our physicians, which are entirely endorsed by the Players Association, as well as the clubs, are, in fact, reflected in the brochure or the booklet that is referenced in my testimony and that Mr. Manfred has referenced, entitled "Steroids and Nutritional Supplements," which, as Rob has

indicated, is the principal educational document that we utilize and has been distributed to all players. The Committee has copies.

And as that document makes clear, all AAS's, as the document refers to it—anabolic androgenic steroids—are classified under Federal law as Schedule III drugs requiring a doctor's prescription to be lawfully used. There are serious health risks. There are serious penalties for unlawful use or distribution, *et cetera*.

But, as the Chairman and the Members of the Committee certainly understand, this is an issue not so easily disposed of as perhaps the sound bites and the rhetoric might otherwise suggest. There are some significant and complex public policy issues involved. Consider just one example. Substances that you might say have "steroidal properties," like DHEA, or that we believe to be, in fact, steroids, androstenedione, are fully legal under Federal law, are sold over the counter in health food and other stores all across the country and, so far as I know, are without even the simple protections of a warning label or an age restriction on purchase, even though the medical evidence is pretty compelling of the dangers of some of those substances, especially to women and to youth.

As was suggested in that booklet, which I remind everyone was jointly authored, it may well be time for the Federal Government to revisit whether such products should be covered by Schedule III or otherwise the subject of appropriate legislation or regulation, and we would welcome such examination by the Congress, by the Food and Drug Administration, or by any other appropriate body.

Another important issue which is implicated in this discussion we summarize in a single word, and that's "privacy." We believe that any program can be successful, on steroids or anything else, only if stringent safeguards are in place to protect the privacy of the employees, particularly so in an industry like baseball in which the lives of the players—and the rest of us, for that matter—are so much in the public eye.

We also recognize the ongoing public debate, which has been referred to in the opening statements this morning, about the merits of cause-based versus random testing. The Players Association has always believed that one should not, absent compelling safety considerations, invade the privacy of an individual without a substantial reason—that is to say without cause—related to conduct by that individual and not merely to his status as an employed baseball player.

We understand, of course, that the principles underlying the Fourth Amendment restrictions on unreasonable searches and seizures are not directly applicable to the private employment setting. Nevertheless, such principles should not, we submit, be lightly put aside.

Let me address a question that is no doubt on the minds of the Chairman, Senator McCain, and the other Members of the Committee, who for so long have been supporters of amateur and professional sports in this country. It has been referred to in the opening statements this morning. What message do we send the children, the kids who are playing ball, maybe dreaming of a career in the big leagues? I think it's the same message that we send the players. Play this great game—and we all think it's the greatest one there is—to the best of your ability, and do so under the rules.

Do not jeopardize your health. Do not use illegal drugs. And don't use any drug or any substance, even if entirely lawful, except on the advice and the recommendation of a competent and knowledgeable physician for a good and substantial reason.

Finally, no one cares more about the game, cares more about the health of the players, than the players themselves. In a very real sense, they are the game. They understand the issues that are involved, and we will find a way, consistent with the principles we believe in, I am confident, over the course of this collective bargaining negotiation, to reach a satisfactory conclusion. I can't tell you today what that will be. I can tell you we're committed to the process.

Thank you very much.

[The prepared statement of Mr. Fehr follows:]

PREPARED STATEMENT OF DONALD M. FEHR, EXECUTIVE DIRECTOR, MAJOR LEAGUE BASEBALL PLAYERS ASSOCIATION

Mr. Chairman and Members of the Committee:

My name is Donald M. Fehr, and I am privileged to serve as the Executive Director of the Major League Baseball Players Association. The MLBPA is the exclusive collective bargaining representative of all major league baseball players. I am pleased to appear today in response to the Committee's invitation to testify.

I appreciate the Committee's interest in and concern about recent reports of the use of illegal steroids in major league baseball which has led to this hearing. Let me be clear. The Major League Baseball Players Association neither condones nor supports the use by players, or by anyone else, of any unlawful substance—steroids or otherwise. Nor do we support or condone the unlawful use of any legal substance. I cannot put it more plainly: both the use of any illegal substance and the illegal use of any lawful substance are wrong.

As the Members of the Committee may know, the MLBPA and the Major League Clubs are currently engaged in the process of negotiating new collective bargaining agreements with respect to terms and conditions of employment of Major League players. The appropriate forum in which to consider these issues is the collective bargaining process, and I am hopeful that before too much longer we will be able to reach a just, fair and effective agreement with the owners on all the issues which divide us, certainly including the ones that we are discussing today. Over the next few weeks we will be meeting with the players on every team, and I can assure the Members of the Committee that these issues will receive serious and thoughtful discussion in those meetings.

I should also add that in my 25 years in this industry I have come to appreciate that successful collective bargaining is not likely to take place in public, even before a Senate committee. Accordingly, while I am happy to engage in a discussion of these issues, it should be clear that we are not bargaining here.

Let me also offer another note of caution. While we all agree that this issue is a very serious one, we should take care not to treat unsubstantiated media reports and rumors as if they were proven fact. I trust that each of you will agree that we must avoid even the possibility of smearing anyone. All who live in the public eye fully understand the damage that unfair accusations can inflict on an individual or group. For this reason, I will not discuss these issues with respect to any particular individual, and I urge the Members of the Committee to adopt a similar approach.

I would also like to correct what may be a misimpression. If one simply were to pay attention to cursory sound bites or sensational magazine covers, one might believe that MLB and the MLBPA have no substance use/abuse program, or that, if one does exist, it makes no reference to steroids. Neither is true. The MLBPA and MLB have long worked with medical professionals to develop the current program, which is directed and administered by physicians appointed by our two organizations. It has a testing component, based upon reasonable cause to believe that a player has engaged in misconduct, or other activity affecting his ability to play. With respect to steroids, our policy is reflected in a brochure entitled *"Steroids and Nutritional Supplements"*, distributed to all players as part of our educational program, copies of which are being provided to the Committee. Among other things, this brochure makes it clear:

- that all "AAS's" (anabolic androgenic steroids) are classified under Federal law as Schedule III drugs, requiring a doctor's prescription;
- there are serious health risks to the use of AAS's;
- that there are serious penalties for unlawful use or distribution of AAS's; and that
- AAS's *"are prohibited in baseball"*.

But, as the Chairman and the Members of the Committee surely understand, this is an issue not so easily disposed of as the sound bites and rhetoric might suggest. There are complex public policy issues involved. Consider just one example: substances having steroidal properties (e.g., DHEA), or that we believe to be steroids (e.g. androstenedione) are fully legal under federal law and are sold over the counter in health food and other stores all across the nation, without even the simple protections of a warning label or an age restriction. As we have suggested in *"Steroids and Nutritional Supplements"*, it may well be time for the federal government to revisit whether such products should also be covered by Schedule III. We would welcome such a reexamination by the Congress and/or the FDA.

Another important issue which is implicated in this discussion can be summarized in a single word: privacy. We believe that any program can be successful only if stringent safeguards are in place to protect the privacy of the employees, particularly so in baseball where the lives of the players are so much in public view. We also recognize the public debate about the merits of cause based versus random testing. The MLBPA has always believed that one should not, absent compelling safety considerations, invade the privacy of someone without a substantial reason—i.e., without cause—related to that individual, and not merely to his status as an employed baseball player. We understand that the principles underlying the 4th Amendment's protection against unreasonable searches are not directly applicable to the private employment setting; nevertheless, such principles should not, we submit, be put aside lightly.

Finally, let me address a question that is no doubt on the mind of the Chairman, Senator McCain, and the other Members of the Committee, who have for so long been supporters of amateur and professional sports in this country: what message do we send to the kids who are playing ball and may be dreaming of a career in the big leagues? Frankly, it is the same message we send to today's players: Play this great game to the best of your ability, and do so under the rules. Do not jeopardize your health. Do not use illegal drugs. And don't take any substance—even if lawful—except on the advice and recommendation of a knowledgeable physician.

Senator DORGAN. Mr. Fehr, thank you very much.

Next we will hear from Greg Schwab. Mr. Schwab, when I mentioned you as a witness, I regrettably, did not give the second portion of the introduction. I said you were a former all-conference offensive lineman from the University of Oregon who took steroids in your attempt to make the San Diego Chargers football team. I should have proceeded to say, as well, that you've since become a passionate advocate against steroid use, as a high school coach and a high school associate principal. You've had one-on-one experience with high school students who have attempted to use steroids, and we appreciate your work. I should have mentioned that as the second portion of you introduction. I do so now.

We welcome you here, and we'll be happy to receive your testimony.

STATEMENT OF GREG SCHWAB, ASSOCIATE PRINCIPAL, TIGARD HIGH SCHOOL

Mr. SCHWAB. Thank you. It's truly a great honor for me to be here today.

Dietary supplements and performance-enhancing drug use among high school athletes is increasing at an alarming rate. Recent studies have shown as much as a 60 percent increase in steroid use among high school athletes.

To better understand what has caused this increase, I would like to share with you some of the things I have observed in my 14 years as a teacher, as a coach, and currently as a school administrator. I would also like to draw on some of my insights as someone who has experienced steroid use firsthand for two and a half years as a college football player and an aspiring player in the National Football League.

For whatever reason, the focus of high school athletics has shifted today. No longer do we preach the values taught by participation in a team or individual sport—the values of competition, teamwork, dedication, and cooperation. These values have been replaced by a new focus or value, simply to excel at the highest possible level.

Now, while you may be asking yourself, "What is so bad about wanting to excel at the highest level," consider what many of these high school athletes are willing to do in order to excel. High school athletes today use all sorts of sports supplements. Protein powders, sports drinks, ephedrine, creatine, and androstenedione are used routinely today as part of their training regimens. Any high school athlete can walk into a store or health club and purchase these dietary supplements, no questions asked.

On several occasions, I have had conversations with the athletes I coached about these issues. Many of them have come to me to ask my advice about taking supplements to help them perform at their highest levels. I have always stressed: take healthier alternatives to these supplements. But for many, supplements are simply too easy to get. Now, while I am no expert on this, I have always believed that dietary supplement use can lead athletes to using performance-enhancing drugs, like anabolic steroids.

The three-sport athlete no longer exists in most high schools today. They have been replaced by athletes who train year round, honing their skills in one sport. Basketball teams play 60 games in the summer, plus a 25-game regular season schedule. Baseball players play 50 games in fall leagues in addition to 25-regular season schedules and 50-game summer schedules.

As a football coach, I expect my players to commit countless hours in the weight room, running, lifting, and working on fundamental skills. Add to this the proliferation of summer sport camps athletes and coaches can choose from, and it is no wonder that many high school athletes have no time for other activities they might be interested in, and it is no wonder that many athletes feel they have to turn to supplements in order to have the strength to complete these long seasons.

For many male high school athletes, pro athletes are major influences. They are the role models. They choose the jersey numbers of their favorite professional players. They emulate their training regimens. They emulate their style of play. And they are influenced by the supplement and drug use. When a professional athlete admits to using steroids, the message young athletes hear is not always the one that is intended. Young athletes often believe that steroid use by their role models gives them permission to use, that is simply part of what one must do in order to become an elite athlete.

Coaches, whether they intend to or not, put a great deal of pressure on their athletes. The demands and expectations of most high school programs rival many college programs. In a sport like football, where the emphasis is on getting bigger and stronger, coaches are constantly pressuring their athletes to gain more weight, to be able to lift more weight than they could a month ago. As a coach, I caught myself saying to my athletes the very things that made me feel the pressure to grow in size and strength beyond what my body was capable of naturally. Athletes grow to feel like no matter what they do, it is not going to be enough for their coaches. Couple this with the fact that athletes are, by their nature, highly competitive, and it is easy to understand why they might turn to supplements and performance-enhancing drugs, like anabolic steroids.

One of the biggest challenges I faced as a coach was trying to effectively dissuade my athletes from using supplements and performance-enhancing drugs. I have always been very open and honest with anyone who asks me about my using steroids. I've regularly shared with my athletes the effects that steroids had on me while I used them for two and a half years during my career as a football player. My hope is that if I can relate to them on a personal level, they will be more likely to listen to me. Too often, though, what they see is someone who used steroids and turned out fine. Instead of listening to me because I am being honest, they think that, if nothing bad happened to me, then they will have the same experience.

The problem is that there is too little information out there on the dangers of steroids. All adolescents hear is how much steroids will help them perform. We need to get the word out at every level and in every way that steroids and supplements are dangerous.

I cannot stress enough how easy it is to get supplements. I cannot stress enough how widespread the use of the supplements is among high school athletes. Drug stores, supermarkets, and health food stores all carry these supplements, and they can be purchased by anyone. While I can only speak for the athletes I coached, I would say that at least 70 percent of them have used some kind of dietary supplement.

Percentages of steroid use are much harder to predict, partly because steroid users simply do not talk about their use. It is not something that anyone would openly admit to. Based on my personal experience, the number of the athletes that I have worked with over the years, a conservative estimate would be between five and ten percent of the athletes that I have coached have used steroids.

I hope you understand that supplement and steroid use among high school athletes is a growing problem that needs to be addressed. I strongly encourage you to take the lead and help curb this problem. Steroid precursors, sold as dietary supplements, need to be regulated. They need to become harder to get. I cannot stress enough what kind of impact supplement use has on young athletes. This, to me, seems to be the first step in helping to solve the larger issue of steroid use.

Thank you.

[The prepared statement of Mr. Schwab follows:]

PREPARED STATEMENT OF GREG SCHWAB, ASSOCIATE PRINCIPAL, TIGARD HIGH SCHOOL

Good Morning, my name is Greg Schwab.

Dietary supplements and performance-enhancing drug use among high school athletes is increasing at an alarming rate. Recent studies have shown as much a 60 percent increase in steroid use among high school athletes. To better understand what has caused this increase; I would like to share with you some of the things I have observed in my 14 years as a teacher, coach, and school administrator. I will also draw on my insights as someone who has experienced steroid use firsthand for two and a half years as a college football player and an aspiring player in National Football League.

For whatever reason, the focus of high school athletics has shifted. No longer do we preach the values taught by participation in a team or individual sport, the values of competition, teamwork, dedication, and cooperation. These have been replaced by a new focus or value, simply to excel at the highest possible level. While you may be asking yourself, "what is so bad about wanting to excel at the highest level?" consider what many of these high school athletes are willing to do in order to excel. High school athletes use all sports supplements like protein powders, sports drinks, ephedrine, creatine, and androstenedione routinely today as part of their training regimen. Any high school athlete can walk into a store or health club and purchase these dietary supplements no questions asked. On several occasions I have had conversations with athletes I coached about these issues. Many times they have come to me to ask my advice about taking supplements to help them perform at their highest levels. I have always stressed healthier alternatives to these supplements, but for many the supplements are simply too easy to get. While I am no expert on this, I have always believed that dietary supplements can lead athletes to using performance-enhancing drugs like anabolic steroids.

The three-sport athlete no longer exists in most high schools today. They have been replaced by athletes who train year-round, honing their skills in one sport. Basketball teams play 60 games during the summer, plus a 25-game regular season. Baseball plays 50 games in fall leagues, in addition to the 25-game regular season schedule and the 50-game summer season schedule. As a coach, I expected my football players to commit countless hours in the weight room lifting, running, and working on fundamental skills. Add to this the proliferation of summer sports camps athletes and coaches can choose from, and it is no wonder that high school athletes have no time for any other activities they might be interested in. any athletes feel they have to turn to supplements to have the strength to compete through the long schedules.

For many male high school athletes, pro athletes are major influences. They are the role models. They choose the jersey numbers of their favorite professional players. They emulate their training regimens. They emulate their style of play. And they are influenced by their drug use. When a professional athlete admits to using steroids, the message young athletes hear is not always the one that is intended. Young athletes often believe that steroid use by their role models gives them permission to use. That it is simply part of what one must do to become an elite athlete.

Coaches, whether they intend to or not, put a great deal of pressure of their athletes. The demands and expectations of most high school programs rival many college programs. In a sport like football, where the emphasis is on getting bigger and stronger, coaches are constantly pressuring their athletes to gain more weight or to be able to lift more weight than they could a month ago. As a coach, I caught myself saying to my athletes the very things that made me feel the pressure to grow in size and strength beyond what my body was capable of naturally. Athletes grow to feel like no matter what they do, it is not going to be enough for their coaches. Couple this with the fact that athletes are by their very nature, highly competitive, and it is easy to understand how and why they might turn to performance enhancing drugs like anabolic steroids.

One of the biggest challenges I faced as a coach was trying to effectively dissuade my athletes from using supplements and performance enhancing drugs. I have always been very open and honest with anyone who asks me about my use of steroids. I regularly shared with my athletes the effects that steroids had on me while I used them for two-and-a-half years during my career as a football player. My hope is that if I can relate to them on a personal level, they will be more likely to listen to me. Too often though, what they see is someone who used steroids and turned out fine. Instead of listening to me because I am being honest, they think that if nothing bad happened to me, then they will have the same experience. The problem is that there is too little information out there about the dangers of steroids. All adolescents hear

is how much steroids will help them perform. We need to get the word out at every level and in every way that steroids are dangerous.

I cannot stress enough how easy it is to get supplements. I cannot stress enough how widespread use of supplements is among high school athletes. Drug stores, supermarkets, and health food stores all carry these supplements and they can be purchased by anyone. While I can only speak for the athletes I coached, I would say that at least 70 percent of them are using some kind of dietary supplement. Percentages of steroid use are much harder to predict, partly because steroid users simply do not talk about their use. It is not something that anyone would openly admit to. Based on my personal experience and the number of athletes I have worked with over the years, a conservative estimate would be between 5 percent and 10 percent of athletes I have coached used steroids.

I hope you understand that supplement and steroid use among high school athletes is a growing problem that needs to be addressed. I strongly encourage you to take the lead and help to curb this problem. Steroid precursors sold as dietary supplements need to be regulated, they need to be harder to get. I cannot stress enough what kind of impact supplement use has on young athletes. This, to me, seems to be the first step in helping to solve the larger issue of steroid use.

Thank you.

Senator DORGAN. Mr. Schwab, thank you very much for your testimony. We appreciate your being here.

Next we will near from Mr. Frank Shorter, chairman of the board for the United States Anti-Doping Agency. A former Olympic athlete, Mr. Shorter won the gold medal in the marathon at the 1972 Olympic Games in Munich, and the silver medal at the 1976 Olympic Games in Montreal.

Mr. Shorter, welcome. We're pleased that you are here. You may proceed.

STATEMENT OF FRANK SHORTER, CHAIRMAN, UNITED STATES ANTI–DOPING AGENCY

Mr. SHORTER. Thank you. Good morning, Mr. Chairman, Members of the Committee. My name is Frank Shorter, and thank you very much for the opportunity to appear before you today.

I may be better known as an Olympic marathoner and television commentator, but today I come to you as chairman of the United States Anti-Doping Agency, which has been recognized by Congress as the independent—independent—national anti-doping agency for the Olympic sport in the United States. Our mission is to protect and preserve the health of athletes, the integrity of competition, and the well-being of sports through the elimination of doping. Last year, we conducted more than 4,800 tests for steroids and other prohibited doping substances, many of these totally unannounced.

As is readily apparent from today's headlines, anabolic steroids and the many steroid precursors sold in the United States as dietary supplements have become a major problem in sport. U.S. athletes are in the untenable position of being at risk of a failed doping test, if they take any dietary supplement, because of product contamination.

In Olympic sport, the most notable systematic, State-supported program of doping with anabolic steroids was that conducted by the East Germans from 1974 until the Berlin Wall fell in 1989. For example, after less than two years of steroid use, the East German women's swimming team competed in the 1976 Olympics in Montreal. In contrast to their performance in 1972, when they won only 5 medals, they won 18 medals, including 11 of 13 possible golds in 1976. The results of this program have since been substantiated

through the testimony of many of the athletes themselves, their coaches and doctors, during the East German doping trials where doctors and coaches were convicted.

The documented side effects of steroids and steroid precursors among these East German athletes and others are severe. They include effects on the liver and reproductive system, growth arrest in adolescence, susceptibility to cancers, permanent—permanent—masculinization of women, and feelings of androgyny that are permanent—let's not forget the other half of the population here—shrinking of testicles and impotence in men, and severe facial disfiguring through acne.

Now, I have a very personal interest in doping in Olympic sport. I won the gold medal for the United States in the marathon in the 1972 Olympics in Munich. And four years later, I ran an even better race, but finished second to an East German at the Montreal games. At the time, I knew it would be absolutely possible to increase my performances and increase my chances of beating the East Germans and others who were using steroids—and let me tell you, the athletes know who's doing what—but it never occurred to me to do so. To me, that's not what sport is about. I didn't cheat, and I finished second.

In our current sport environment, the availability of steroid precursors as dietary supplements is of major concern. And one example, as we've all seen here, is androstenedione, which originally was developed as part of the East German steroid program. It metabolizes into the body into the steroid testosterone.

And following the acknowledgment by Mark McGwire in his home-run record year that he's used androstenedione, as we've seen, sales in the United States dramatically increased, as Senator McCain mentioned. This phenomenal demand, particularly among teenagers, led to the mass marketing of other steroid precursors, like norandrostenedione, which also metabolizes in the body and produces a steroid nandrolone.

Through our testing program, USADA has recognized a serious problem with the sale of steroid precursors and dietary supplements. In increasing numbers, athletes are failing doping tests after taking mislabeled dietary supplements. Reasonably cautious athletes know how to avoid products that have steroid precursors reflected on the product label. But, unfortunately, a surprisingly high percentage of dietary supplements contain doping substances, which will get you busted by us, that are not on the label.

The International Olympic Committee found, in a recent study of 624 dietary supplements, that 41 percent of the products from American companies contained a steroid precursor or a banned substance, and it wasn't disclosed on the label.

The fact that U.S. companies have flooded the market with steroid precursors has caused the international sporting community to charge that the United States is the prime source of international doping pollution. The international community can't understand why all our professional sports do not test for steroids and other performance-enhancing substances. They simply can't understand why we allow steroid precursors to be sold over the counter, like candy, to our teenagers and to their teenagers, via the Internet. It is important to the image of America and to all clean athletes to

not be perceived as a society that condones the use of steroids and steroid precursors.

The status quo presents significant health risks for athletes and the general public. It undermines the image of the United States and our athletes as actually being committed to drug-free sport. The solution to the steroid precursor problem is to follow the lead of other nations and regulate steroid precursors as steroids, give them steroid status. This could be accomplished through a minor modification of the Controlled Substances Act that already recognizes the importance of regulating immediate precursors to controlled substances—in other words, precursors in manufacturing, as opposed to metabolizing in your body. With only a minor modification, the definition in the act of "immediate precursor," the Attorney General would have the authority to classify steroid precursors as controlled substances equal to steroids. It is likely that the production of these steroid precursors will stop as soon as they can no longer be sold over the counter.

Our organization considers Congress to be the appropriate place to turn for the necessary leadership on these issues. USADA believes we are in the midst of a health crisis that's rooted in professional and amateur sport and impacts the youth of our nation. It's not limited to their quest for athletic performance and accomplishment, but also includes the basic pursuit of recognition.

Now is the time to enact change that will prevent our children from becoming a generation exposed to wide steroid use. Children have always emulated their sports idols. I did. And these same children—we have to wake up to the fact—more often than we would like to admit, know much more than adults—their parents and everyone else who's an adult—do about just what their idols did and are doing to achieve their goals. They should never have to feel that, at some time in their athletic careers, there will be no choice but to take these illegal performance-enhancing drugs and the precursors that produce these drugs in their bodies.

We plead with you to provide intervention to this health crisis and seek legislation and regulation.

Thank you.

[The prepared statement of Mr. Shorter follows:]

PREPARED STATEMENT OF FRANK SHORTER, CHAIRMAN, UNITED STATES ANTI-DOPING AGENCY

Good morning, my name is Frank Shorter. Thank you for the opportunity to testify before you today. You may know me as an Olympic marathoner and television commentator, but today I come to you as the Chairman of the United States Anti-Doping Agency, which has been recognized by Congress as the independent, national anti-doping agency for Olympic sport in the United States. Our mission is to protect and preserve the health of athletes, the integrity of competition, and the well-being of sport through the elimination of doping. Last year we conducted more than 4800 tests for steroids and other prohibited doping substances. As is readily apparent from today's headlines, anabolic steroids and the many steroid precursors sold in the United States as dietary supplements have become a major problem in sport. U.S. athletes are in the untenable position of being at risk of a failed doping test if they take any dietary supplement because of product contamination.

In Olympic sport, the most notable, systematic state-supported program of doping with anabolic steroids was that conducted by the East Germans from 1974 until the Berlin Wall fell. For example, after less than two years of steroid use the East German women's swimming team competed in the 1976 Olympics in Montreal. In contrast to their performance in 1972, when they won only five medals, they won 18

medals including 11 out of 13 possible golds in the 1976 Games. The results of this program have since been substantiated through the testimony of many of the athletes themselves, their coaches and doctors during the East German doping trials.

The documented side effects of steroids and steroid precursors among these East German athletes and others, are severe and include effects on the liver and reproductive system, growth arrest in adolescents, susceptibility to cancers, permanent masculinization of women, shrinking of testicles and impotence in men, and scarring from steroid acne.

I have a very personal interest in doping in Olympic Sport. I won the gold medal for the United States in the marathon at the 1972 Olympics in Munich. Four years later, I ran an even better race but finished second to an East German at the Montreal Games. At the time, I knew that it would be absolutely possible to increase my chances of beating the East Germans and others who were using steroids if I cheated by doping, but it never occurred to me to do so. To me that is not what sport is about. I didn't cheat and I finished second.

In the current sport environment, the availability of steroid precursors as dietary supplements is of major concern. One example is androstenedione, which, originally developed as part of the East German steroid program, metabolizes in the body into the steroid testosterone.

Following the acknowledgement by Mark McGwire in his home run record year, that he had used androstenedione, sales in the United States dramatically increased. This phenomenal demand, particularly among teenagers, led to the mass marketing of other steroid precursors like 19-norandrostenedione, which metabolizes in the body into the steroid nandrolone.

Through our testing program USADA has recognized a serious problem with the sale of steroid precursors in dietary supplements. In increasing numbers, athletes are failing doping tests after taking mis-labeled dietary supplements. Reasonably cautious athletes know to avoid products, which have steroid precursors reflected on the product label. Unfortunately, a surprisingly high percentage of dietary supplements contain doping substances, which are not disclosed on the label. For example, a recent study of 624 dietary supplements by the International Olympic Committee found that 41 percent of the products from American companies contained a steroid precursor or banned substance not disclosed on the label.

The fact that U.S. companies have flooded the market with steroid precursors has caused the international sporting community to charge that the United States is the prime source of "international doping pollution." The international community simply can't understand why all of our professional sports do not test for steroids and other performance enhancing substances. They can't understand why we allow steroid precursors to be sold over the counter like candy to our teenagers (and their teenagers via the Internet). It is important to the image of America and to all clean American athletes that we not be perceived as a society that condones the use of steroids and steroid precursors.

The status quo presents significant health risks for athletes and the general public; it undermines the image of the United States and our athletes as being committed to drug-free sport. The solution to the steroid precursor problem is to follow the lead of other nations and regulate steroid precursors as steroids. This could be accomplished through a minor modification of the Controlled Substances Act, which already recognizes the importance of regulating immediate precursors to controlled substances. With only a minor modification to the Act's definition of "Immediate Precursor" the Attorney General would have the authority to classify steroid precursors as controlled substances equal to steroids. It is likely that the production of these steroid precursors will stop as soon as they can no longer be sold over the counter.

Our organization considers Congress to be the appropriate place to turn for the necessary leadership on these issues. USADA believes we are in the midst of a health crisis, which while and the development of a body that mirrors the image of the elite athlete. Now is rooted in professional and amateur sport impacts the youth of our nation. It is not limited to their quest for athletic performance and accomplishment, but includes the pursuit of recognition the time to enact change that will prevent our children from becoming a generation exposed to widespread steroid use. Children have always emulated their sports idols, I did. And these same children, more often than we would like to admit, know much more than adults do about just what their idols did and are doing to achieve their goals. They should never have to feel that at some time in their athletic futures there will be no choice but to take these illegal performance enhancing drugs and precursors. We plead with you to provide intervention to this health crisis and seek revised legislation and regulation.

Thank you.

Senator DORGAN. Mr. Shorter, thank you very much.

And, finally, we will hear from Dr. Bernard Greisemer. He is a pediatrician from Missouri who has written extensively about steroid use and teenagers.

Dr. Greisemer, thank you for being here. Why don't you proceed?

STATEMENT OF DR. BERNARD GREISEMER, PEDIATRICIAN

Dr. GREISEMER. Thank you, Mr. Chairman.

This year, I will begin my 25th year as a pediatrician and sports medicine specialist, and I appreciate this opportunity to present both medical information and my concerns regarding the increasing use in young athletes of products that contain anabolic steroids. The highly publicized use of these substances by professional athletes does influence the incidence of use in elementary, middle school, high school, and collegiate athletes.

For purposes of our discussion, pediatricians do not distinguish between anabolic steroids and steroid precursors that are in dietary supplements. These substances have the same effects. These substances have the same health risks.

There are three points I would like to briefly address that serve to reinforce some of the statements that Senator McCain made in his opening comments. There are major health problems associated with the use of anabolic steroids in all age ranges. However, the side effects of anabolic steroids in younger athletes have the potential of far greater risks than they do in adult athletes. Young athletes who start using these products in the middle school years and continue to use them through adolescence and into adulthood are likely to face higher risks of cardiac, hepatic, dermatologic damage. Many of my teenage male athletes are very unhappy to learn that managing their premature male pattern baldness is very difficult if they have been using dietary supplements with steroids since they were in 7th grade. The risk of cardiovascular complications of the use of these substances are the subject of ongoing research. And the possibility that the complication rate for younger athletes is higher than the adult population is only now beginning to be explored. The list of organ systems in young athletes that can potentially suffer severe adverse effects of anabolic steroids includes nearly every organ system in the human body.

One side effect of these substances is unique to the younger athletes. Medical research has documented that anabolic steroids, even when used in disease management, result in the acceleration of pubertal development and premature height growth arrest. This adverse effect is not seen in the adult population of athletes and is unique to the skeletally immature young athlete. This growth arrest is irreversible.

In women of all ages, many of the effects of these substances on the vocal cords and the reproductive system are irreversible. The evidence that these products result in long-term health complications in young women and may even result in severe deformities in their offspring is currently coming to public attention in Germany.

Younger athletes also have an additional problem. The product disclaimers and fine print lists of side effects that accompany these substances are often written in language that exceeds the reading

comprehension level of middle school students. Young athletes see the flashy banners, hear the endorsements of professional athletes, and see the effects of these drugs on professional athletes when they are competing on television. Young athletes are less likely to read and understand warning labels.

Further, in many circumstances, the labeling of products containing anabolic steroids is either inaccurate or unavailable. This fact is primarily what brings young athletes into our offices with questions about anabolic androgenic steroids.

This leads to my second point of discussion. The effect of media exposure and marketing campaigns on young athletes is clearly established. Perception about self image, peer relationships, and success are easily manipulated at this age range. Major corporate efforts and financial resources are targeted at this age range in attempts to influence lifestyles and purchasing trends. These trends are expected to persist into adulthood. This statement is supported by research in our medical literature and by research from the media, advertising, and marketing industries.

In this context, professional athletes are major role models for our young athletes in the clothes they wear, the cars they drive, the food they eat, and the drugs and dietary supplements they take. The millions of dollars that are spent by major corporations in linking their products to a particular athlete, team, or sporting event counter any argument that professional athletes are not affecting the lifestyles of our young athletes. Use of and media exposure of the use of anabolic steroids among professional athletes also directly affects the interest in, the perception of benefits of, and the use of these substances in our young athletes.

I need to emphasize that I and other pediatricians are seeing the effect that professional athletes' behavior has in affecting the behavior of our young athletes at increasingly younger ages over the last two decades. We see this in the questions they ask regarding anabolic steroids and other dietary supplements that are promoted as having anabolic performance-enhancing effects. We see the frequency of these questions with each new media expose of the use of these substances by professional athletes.

Pediatric medical literature has now documented the use of these products that contain anabolic androgenic steroids in athletes as early as the middle school age range. Recent research has documented use of anabolic androgenic steroids in 2.6 percent of both male and female young athletes as early as 5th grade.

In my experience, one of the most compelling reasons that these young athletes are using or are thinking about using these products is that the media and the aggressive marketing campaign used by manufacturers all identify these products—and in the case of manufacturers, heavily promote the use of these products—as being used by the pros.

Third, pediatricians strongly agree with the Surgeon General of the United States that physical activity and proper nutrition are critical components of health in our young people. Establishing lifelong patterns of physical activity in the middle school and high school age ranges is one of the most effective means of achieving this goal. Youth sports are the most important way in which American youth become and remain physically active. Any role model for

youth in the arena of sports could have a positive influence on these young athletes to initiate and to continue competitive physical activity.

Conversely, any perception that a young athlete can't participate, compete, or excel in sports without the use of anabolic steroids will adversely affect youth participation in sports. If the perception involving professional athletes and anabolic steroids is that everybody does it or you can't win without these substances, many young athletes will either stop participating or start using these substances.

With physical activity becoming an increasingly important component of health in America, any effort to reduce the use of anabolic steroids, at all levels of competition, will increase the participation rates of our young athletes, who understand that they can just do it without cheating. Pediatricians are adamant in their support of any program or legislation that strives to keep our young athletes healthy and strives to keep our youth sports programs healthy and drug-free.

In summary, I strongly urge you to support any program that seeks to improve the health of the children in America. I strongly urge you to consider the impact of the use of the anabolic androgenic steroids by professional athletes and the effect that it has on our young athletes. Any effort to curb the use of these products in athletes of all ages, whether by drug-testing programs and educational programs that are currently being developed by USADA, or by supporting youth programs that promote healthy training and conditioning alternatives to the use of these drugs, will be helpful to us. Pediatricians are working hard to develop healthy, drug-free, physically active young Americans.

I thank you again for this opportunity to bring this important issue to your attention.

[The prepared statement of Dr. Greisemer follows:]

PREPARED STATEMENT OF DR. BERNARD GREISEMER, PEDIATRICIAN

Good morning, my name is Dr. Bernard Greisemer.

This year, I will begin my twenty-fifth year as a pediatrician and a sports medicine specialist. I appreciate this opportunity to present both medical information and my concerns regarding the increasing use in young athletes of products that contain anabolic steroids. The highly publicized use of these substances by professional athletes does influence the incidence of use in elementary, middle school, high school, and collegiate athletes.

For the purpose of our discussion, pediatricians do not distinguish between anabolic steroids and steroid precursors that are in dietary supplements. These substances have same effects and health risks.

There are three points that I would like to briefly address.

There are major health problems associated with the use of anabolic steroids in all age ranges. However, the side effects of anabolic steroids in younger athletes have the potential of far greater risks that they do in adult athletes. Young athletes who start using these products in the middle school years and continue to use them through adolescence and into adulthood are likely to face higher risks of cardiac, hepatic, and dermatologic damage. Many of my teenage male athletes are very unhappy to learn that managing their premature male pattern baldness is very difficult if they have been using dietary supplements with anabolic steroids since they were in seventh grade. The risks of cardiovascular complications of the use of these substances are the subject of ongoing research and the possibility that the complication rate for younger athletes is higher is only now beginning to be explored. The list of organ systems in young athletes that potentially can suffer adverse effects of anabolic steroids includes nearly every organ system in the human body.

One side effect of these substances is unique to the younger athletes. Medical research has documented that anabolic steroids, even when used in disease management, results in the acceleration of pubertal development and premature height growth arrest. This adverse effect is not seen in the adult population of athletes and is unique to the skeletally immature young athlete. This growth arrest is irreversible.

In women of all ages many of the effects of these substances on the vocal cords and the reproductive system are irreversible. The evidence that these products result in long health complications in young women and may even result in severe deformities in their offspring is currently coming to public attention in Germany.

Younger athletes also have an additional problem. The product disclaimers and fine-print list of side effects that accompany these substances are often written in language that exceeds the reading comprehension level of middle school students. Young athletes see the flashy banners, hear the endorsements of professional athletes, and see the effects of these drugs on professional athletes when they are competing on television. Young athletes are less likely to read and understand warning labels. Further, in many circumstances the labeling of products containing anabolic steroids is either inaccurate or unavailable. This fact is primarily what brings young athletes into our offices with questions about anabolic androgenic steroids.

This leads to my second point of discussion. The effect of media exposure and marketing campaigns on young athletes is clearly established. Perceptions about self-image, peer relationships, and success are easily manipulated at this age range. Major corporate efforts and financial resources are targeted at this age range in attempts to influence lifestyles and purchasing trends that are expected to persist into adulthood. This statement is supported by research in our medical literature and by research in the media, advertising, and marketing industries. In this context, professional athletes are major role models for our young athletes; in the clothes they wear, the cars they drive, the food they eat, and the drugs and dietary supplements they take. The millions of dollars that are spent by major corporations in linking their products to a particular athlete, team, or sporting event, counter any argument that professional athletes are not affecting the lifestyles of our young athletes. Use of, and media exposure of the use of, anabolic steroids in professional athletes also directly affects the interest in, the perception of benefits of, and the use of these substances.

I need to emphasize that myself and other pediatricians are seeing the effect of professional athlete's behavior affecting the behavior of our young athletes at increasingly younger ages over the last two decades. We see this influence in the questions they ask regarding anabolic steroids and other dietary supplements that are promoted as having anabolic performance enhancing effects. We see the frequency of these questions surge with each new media expose of the use of these substances by professional athletes. The pediatric medical literature also has documented the use of products that contain anabolic androgenic steroids in athletes as early as the middle school age range. Recent research has documented use of anabolic androgenic steroids in 2.6 percent of both male and female young athletes as early as fifth grade. In my experience, one of the most compelling reasons that these young athletes are using or are thinking about using these products is that the media and the aggressive marketing campaigns used by manufacturers all identify these products (and in the case of the manufacturers, heavily promote the use of these products) as being "used by the pros".

Third, pediatricians strongly agree with the Surgeon General of the United States that physical activity and proper nutrition are critical components of health in our young people. Establishing lifelong patterns of physical activity in the middle school and high school age ranges is one of the most effective means of achieving this goal. Youth sports are one of the most important ways in which American youth become and remain physically active. Any role model for youth in the arena of sports could have a positive influence on these young athletes to initiate or to continue competitive physical activity. Conversely, any perception that a young athlete can't participate, compete or excel in sports without the use of anabolic steroids will adversely affect youth participation in sports. If the perception involving professional athletes and anabolic steroids is that "everyone does it" or "you can't win without these substances" many young athletes will either stop participating or start using these substances. With physical activity becoming an increasingly important component of health in America, any effort that seeks to reduce the use of anabolic steroids, at all levels of competition, will increase the participation rates among our young athletes who will understand that they can "just do it" without cheating. Pediatricians are adamant in their support of any program or legislation that strives to keep our young athletes healthy and strives to keep our youth sports programs healthy and drug free.

In summary, I strongly urge you to support any program that seeks to improve the health of the children in America. I strongly urge you to consider the impact that use of anabolic androgenic steroids by professional athletes has on our young athletes. Any effort to curb the use of these products in athletes of all ages, whether by drug testing programs and educational programs as currently are being developed by USADA, or by supporting youth sport programs that promote healthy training and conditioning alternatives to the use of these drugs, will be helpful to us. Pediatricians are working hard to develop healthy, drug free, physically active young Americans.

I would again like to thank you for this opportunity to bring this important issue to your attention.

Senator DORGAN. Dr. Greisemer, thank you very much. Can you talk about the product samples you have before you?

Mr. SHORTER. These were just a trip to a local supplement store—went in and bought them. And this would be androstenedione. This would be norandrostenedione. The doctor can explain this one. This one has progesterone. I don't know why you would want to rub a gel, if you're a man, on your arm with something that's——

Dr. GREISEMER. Now, why one of my male 18-year-old patients would want to put an oral contraceptive on his scalp is beyond me.

Senator DORGAN. Well, it's beyond us, as well.

[Laughter.]

Senator DORGAN. You want to——

Mr. SHORTER. But I think the operative—the illustration is, this essentially—androstenedione was developed by the East Germans, because it was a very convenient way of basically getting testosterone into the bodies of their athletes, and a 12-year-old kid can buy it like candy.

Our main attorney sent his 11-year-old son into a health food store last year, and he was able to buy all this stuff.

Senator DORGAN. So let me start then, with a question that relates to that. If, for example, in baseball, they ban steroid use and test for it—have a rigid testing regime—but don't deal with the precursors, have they solved the problem, Mr. Shorter?

Mr. SHORTER. Well, if they test for—the doctor can answer that a little better—but if they do ban the use of testosterone, no, they would have to ban the use of androstenedione.

Dr. GREISEMER. The dietary precursors, the level of sophistication in testing will pick up the dietary supplement precursors of anabolic steroids. So if they allow testing, they will pick up the use of those precursors.

Senator DORGAN. And, Mr. Colangelo, you have ownership of both a team in Major League Baseball and also in the National Basketball Association. You have two professional teams. You have testing mandatory in one and not in the other. Is that correct?

Mr. COLANGELO. Yes.

Senator DORGAN. Can you describe the two circumstances? Do you feel confidence that the testing with respect to the NBA players is effective and testing that can be relied upon?

Mr. COLANGELO. Yes. First of all, I was more or less appalled to find out that baseball did not have a program when I came into baseball, because I have been front and center in the NBA on this issue. I had some personal experiences with our basketball team years ago in Phoenix, and basically took on the Players Association

on this issue, head on. I've been a strong proponent of random mandatory testing, not to catch anyone, but to serve as the ultimate deterrent. I'm convinced that that's exactly what needs to be done.

I think this is a program that could be monitored internally, as we do in the NBA, between the Players Association and ownership. It does work. It may not be perfect, but it's a program that exists. And I'm very happy that we have one in the NBA and very hopeful that we have one in Major League Baseball soon.

Senator DORGAN. Mr. Fehr, I'm going to ask you a question, but I want to follow on that with Mr. Shorter and Dr. Greisemer. In the NBA, they have a testing program. Would that testing—or perhaps I should ask Mr. Colangelo—would that testing pick up these precursor supplements? And are these precursors supplements banned in the NBA?

Dr. GREISEMER. I can't answer the question of whether they are banned, but I know that if adequate testing is done, depending on the testing they do, they will pick up use of these precursors.

Senator DORGAN. So if someone in the NBA were taking andro, they would pick that up in the testing?

Dr. GREISEMER. And if the testing program uses the appropriate panels, they will pick it up.

Senator DORGAN. I see. I would be interested to try to understand whether in the other sports that do mandatory testing, whether those supplements are included as banned substances.

Mr. COLANGELO. You know, the only comment I'd like to add there is, certainly I'd like to see these products taken off the marketplace. I would. But we can't control that. That's in your domain. But short of that, if leagues ban the use of substances, and a player chooses to use the substance, whether he can buy it off the counter or not, it's still breaking the rule. And so, you know, an intelligent person makes that decision, one way or the other.

And so, you know, I think it's important to note that in the NBA, as it is in the NFL, privacy, which seems to be the big obstacle, you know, as far as the Players Association is concerned, can be dealt with, again, because there is a partnership that exists, one, to educate the players, number two, to help those who have a problem, and they have the opportunity to come forward and be helped. But, you know, if people make mistakes over and over again, then you have to deal with it.

It's a privilege to be a professional athlete. It is not an entitlement, and rules are rules.

Senator MCCAIN. If my colleague would yield——

Senator DORGAN. Yes, of course.

Senator MCCAIN.—I've just been handed a piece of paper that says the NBA does consider androstenedione illegal, in answer to your question.

Senator DORGAN. Yes, thank you.

Mr. Fehr, let me ask you, the articles that have been written in recent days, and the follow-up articles as well, have quoted some wonderful star players in baseball who also expressed great regret that others are taking banned substances. And, I mean, you know, I said at the start, it's not my interest in tarnishing baseball. I love baseball. I think it's a wonderful game, and it's played by splendid

athletes. And, as I indicated, some of the great stars in baseball have also expressed great regret about others who use steroids.

As you begin your meetings with baseball players, let me ask you, generally, do you think—is there a problem here? Is this much ado about nothing? Is there a problem? If so, is it a big problem? Can you give me a sense of what you and what the players think about this issue?

Mr. FEHR. Am I supposed to pay attention to the light that went on in front of you? I'm not—if I'm not, I won't. It just happened to go on. I don't know if I have a time limit.

Senator MCCAIN. Not when the Chairman asks the question.

Mr. FEHR. Okay. Let me respond, if I may, on several different levels, because I think it's obviously an important question. First of all, I think that, in the meetings with players, we will have a frank and open discussion. I wouldn't expect to make public the nature of those discussions. Players have a right to treat their discussions with their staff and their executive director as confidential, and they expect me to do the same. And the results of those meetings will, in large part, although not entirely, drive the collective bargaining position that we will eventually take.

Secondly, there are, I think, perhaps three levels of problems. One is a public perception problem, and that's a problem which exists whether or not there's an underlying problem that has to be dealt with in some appropriate way that we need to look at in a fashion that everyone can live with, first of all. Secondly, it may well be that we have to reexamine in some fundamental way the education efforts that we have been doing—that's one of the subjects that undoubtedly will come up in my discussions with players across the board—and translate that into the collective bargaining discussions we have with the clubs.

Third, though, if you'll permit me, I want to widen the discussion a little bit, beyond baseball. As is apparent from the testimony of every witness you have in front of you today and from the various bottles of substances that are on my left about four feet down the road, something changed in this country in the last ten years.

What changed, in my judgment, are two things. A wide variety of substances are now available, apparently across the board, without the ordinary kinds of caution which have previously attached to the sale of substances, whether it's an age restriction, whether it's a warning label, whether it's "Don't take, except on the advice of doctor," whether it should be by prescription, whatever it is.

The second thing which has happened is mammoth, widespread, monumental, across-the-board advertising to the extent that what we now see on television—all day, every day, and in every magazine that you pick up—is an ad. And the ad says, "Feel bad? Here's this pill." If it's a prescription, "Go see your doctor." If it isn't, "Go the health food store and take it." That's a fundamentally different scenario than I faced growing up and that I suspect you faced growing up. And that's a reality which I think relates to whether or not there needs to be substantially greater regulation.

We've had comments about the effects on kids and on women of the testosterone precursors. And, in my testimony, I had indicated that we think that needs to be looked at all over again. In the research we did that was jointly funded with Major League Baseball,

and on the advice of the doctors that have talked to both of us, I can find or have no memory of any redeeming quality for any of these substances for a child or certainly for a woman. And yet there they are. And so I think we have problems on a multiplicity of levels.

And, with all due respect, I don't think the problems that are being described now are going to be solved based upon whether or not baseball gets their collective bargaining agreement. That's a problem we'll have to deal with on our own for baseball, but the problems are rather more widespread than that.

Senator DORGAN. Senator McCain?

Senator MCCAIN. Thank you, Mr. Chairman. Mr. Manfred, I appreciate your testimony very much, but there's something I don't quite understand. If Major League Baseball feels as strongly as you say they do about testing athletes, why would you agree to a contract with the players that prohibits testing?

Mr. MANFRED. The last collective bargaining agreement that we reached did not contain a provision that allowed testing. The contract doesn't prohibit it, but it doesn't have a provision that would allow us to go ahead with it. If you recall, that contract was a product of a long and difficult strike. And, frankly, the issue of steroids has become one that has been higher on the horizon since the conclusion of that agreement in the mid-1990s.

Senator MCCAIN. Mr. Fehr, I understand and appreciate your comments, particularly concerning the confidentiality of your discussions with the players, and I understand that you will be visiting every team in both leagues shortly. Can you at least assure the Committee that this will be a very, very important item of discussion with the players?

Mr. FEHR. I have no hesitancy at all about doing that, I think, for two reasons, one of which is that the players will insist on it, given the publicity that's happened. And the second one is that we have an obligation to bargain this issue in good faith and have every intention of doing so. So while we have a lot of issues to discuss, I think as you know and perhaps the other Members of the Committee know, there are more than a few things that divide us. I expect this to be a very significant topic of discussion, yes.

Senator MCCAIN. And you will perhaps carry the message that, I think, is prevalent, not so much in this Committee, but in the United States of America, that the credibility of their performances and the confidence of the American people in the reliability and validity of the game is at stake here.

Mr. FEHR. I——

Senator MCCAIN. Let me just—before you answer—Shilling says that muscle-building drugs have transformed baseball into something of a freak show. Quote, "You sit there and look at some of these players, and you know what's going on," he says. Quote, "Guys out there look like Mr. Potato Head, with a head and arms and six or seven body parts that just don't look right. They don't fit. I'm not sure how steroid use snuck in so quickly, but it's become a prominent thing very quietly. It's widely known in the game."

Isn't that pretty damning comment on the part of one of the greatest athletes in baseball? And I'll let Mr. Colangelo speak after you respond.

Mr. FEHR. I make it a habit, and also by direction from my membership, not to comment on comments that individual players make. And so the players are perfectly able, and do, speak for themselves. And I don't attempt to comment on that.

I will say players read the newspapers. They watch television. They understand the visibility and the significance that this particular controversy has at this point in time. And whatever else I do, I fully and accurately report feelings transmitted to me, certainly in hearings like this, and I will do so.

Senator MCCAIN. Thank you, Mr. Fehr.

Mr. Colangelo?

Mr. COLANGELO. Senator, I'd go as far as to say, based on my own conversations with my players, that they're basically crying out for some program that would involve testing—as long as there is privacy. And I'm not speaking for any one player. I'm just saying, generally speaking, conversations with my players, they recognize it's an issue, it's a problem, and they would like to see it resolved. So this is—this is not rocket science.

To me, this is a very simple thing. There's a problem. One side is willing to solve the problem. We need the cooperation of the Players Association to resolve the issue. And hopefully it will be done in collective bargaining during this period of time.

Senator MCCAIN. Mr. Shorter, I want to thank you for the credibility and the information you bring before this Committee. In the interest of straight talk, I would like to say that I don't know what legislation could be contemplated by this Committee or any Member of Congress to force anything on the baseball players and the Players Association. Maybe we could think of something.

But I think that the purpose of this hearing is to try to ensure that the American people are informed, not only of the problem, but as Mr. Shorter points out, and Mr. Greisemer, that there are solutions to this issue. It's not an unsolvable issue. Is that right, Mr. Shorter?

Mr. SHORTER. That's right. Really the place to start is a very simple amendment of the Act to give the Attorney General the power to decide if a precursor should be included. And this simply—as we read the act, and our legal people read the act, in essence, now it exists that precursors in the—very simply put, a precursor, in the course of manufacturing, is banned. If there's a controlled substance and, in the course of manufacturing, a precursor identified in the manufacturing process is banned.

So, it seems just logical and common sense that your body is a pretty good manufacturing organism. That process extends over into the human body, so that a precursor in your body manufacturing that prohibited controlled substance should also be banned. It's not rocket science.

Senator MCCAIN. Mr. Greisemer, do you agree with that?

Dr. GREISEMER. Yes. In pediatrics, it's sort of beyond why it is banned in the manufacturing process and it's not banned in a 12-year-old manufacturer.

Senator MCCAIN. I thank you. I want to thank the witnesses. I think the preferred way that all of us would like to see this aspect of the problem cured is a fairly rapid agreement between the owners and the players along the lines of the NBA and the NFL.

Mr. Shorter raises a broader issue and is involved in a far broader issue, and perhaps that should be the subject of further investigation by the Congress.

I thank the witnesses for being here today.

Senator DORGAN. Senator Fitzgerald?

STATEMENT OF HON. PETER G. FITZGERALD, U.S. SENATOR FROM ILLINOIS

Senator FITZGERALD. Thank you, Mr. Chairman, and thank you for holding this hearing. I think it's an important hearing. And I want to thank all of the witnesses for being here.

I have a ten year old son who is an absolute baseball fanatic, and he knows most of the statistics of almost every major league player in both leagues. I guess he really leans more toward being a White Sox fan. I tell him that, as the son of a Senator from Illinois, he has to be both a Cubs and a White Sox fan. I actually grew up a Cubs fan, as did my father.

We have frequent discussions in which we try to link current players that my son is growing up watching, with with the players that I grew up watching, as well as some baseball legends of old like Babe Ruth and Ted Williams. My son has always taken the position that the players today are much better than the players that I grew up watching. I remember telling him about Ernie Banks, who was the star for the Cubs when I was growing up. Ernie, several times, hit over 40 home runs. I think, in a couple of years—maybe in 1956, when he won the MVP championship, or in the late 1950s—I think he hit over 50 home runs. My son said, "Well, that's nothing." He now has 14 players to point to, who, in the last five years, have hit over 50 home runs. Only 34 players in the history of Major League Baseball have hit over 50 home runs in a season. So, I wonder about the validity of comparing current players with those legends of old that many of us grew up watching. It is very distressing to read all the publicity about possible steroid use in baseball.

Mr. Fehr, I'd certainly like to encourage the players' union to rapidly try to address this issue. I know you have to represent views on both sides, but I'm aware that there are some players, such as Frank Thomas, who is a two-time league MVP, and plays for the White Sox, who have spoken out in favor of mandatory testing. He has pointed out that players who don't want to use steroids are at a competitive disadvantage, because others are using steroids. What, Mr. Fehr, do you think can be done to protect the interests of those, such as Frank Thomas, who don't want to use steroids?

Mr. FEHR. Thank you, Senator. First of all, I think it's a very difficult trick to be both a White Sox and a Cubs fan, so I have some sympathy for your son. Usually a single rooting interest is much easier to have.

Secondly, on the real focal point of your question, unfortunately I'm not in a position in which I can talk very much about discus-

sions among players on these issues and the kinds of questions that have been raised by Mr. Thomas to which you've referred. I can assure you that we will do our very best to find a way through this. It's part of the collective bargaining process. We're committed to it. I can't tell you what the result is going to be ahead of time, but it's obviously a serious issue which will be treated as such.

Senator FITZGERALD. Do you think members of your union, now that they see the Senate holding hearings on this, understand that, if they were to oppose mandatory drug testing, that they could be inviting congressional action that would probably be more draconian than a voluntary program or an internal agreement amongst the players and owners in Major League Baseball? Are the players aware that they could have the force of law requiring some kind of mandatory testing?

Mr. FEHR. Senator, I think about the best way I can respond to that is this. I will certainly transmit your comments. They speak for themselves better than I can. And we will have to be committed to the bargaining process. Unfortunately, there's no way to respond to that question other than in that fashion.

I do want to suggest, however, that, depending on how you approach this, there are degrees of complexity to this problem which don't lend themselves to perhaps as simple of an analysis as people might otherwise want to consider.

For example, Mr. Shorter mentioned that you can have individuals that test positive in the Olympics for banned substances who effectively had no idea what they were doing. One of the things I understand to be the case is that you can test for nandrolone as the result of using creatine what would pass in this day and age as an ordinary, garden variety, fully lawful protein or dietary supplement, in that fashion. And these things have to be worked through.

I can assure that, as the players always have, as they debate and discuss among themselves and talk to one another and eventually reach a consensus, the views of everyone will be taken into consideration, and I will certainly transmit the views of this Committee and your comments.

Senator FITZGERALD. Mr. Shorter, Mr. Fehr points out that there are difficulties in implementing this testing. I think that someone pointed out to me that some individuals just naturally have a higher level of testosterone in their bodies and could result in a false positive for steroid usage. How do you focus our testing so that there are not a lot of false positives?

Mr. SHORTER. Well, I—again, I would like to have the doctor comment once I'm done so he can tell me what I said incorrectly.

[Laughter.]

Mr. SHORTER. But the number of false positives is not that great, to my level of understanding of this. And it really does come around in the supplement side of it. This doesn't have to do with false positives for banned substances. There aren't many.

Testosterone, for an example, there is a test that can show whether or not you are taking something that's produced—synthetic testosterone—I mean, if you've taken synthetic testosterone. The difficulty is in having a test that shows if your testosterone is elevated. It's a little confusing here, but if your test isn't specific

for androstenedione, if your body naturally produces the testosterone, a test showing that it's synthetic won't show it, you see. So you have to really target your test.

Now, that's different from saying whether or not you have false positives. It's really a question of deciding exactly what it is you want to test for and developing a test for those specific things. But that's not that difficult. The list is not as extensive as people would believe.

And just another point—just a personal point on this—I think the perception—the misperception over the last 15 or 20 years has been in part of the problem. People say, "Well, you know, the athletes will just go find something else." So there's not only the question of false positives. It's, "Oh, there are a myriad of drugs out there. You ban one, they're just going to find another." It's not true. It really was a question of the testing being precise. Perhaps some people feel that maybe some of the agencies doing it weren't particularly interested in finding certain substances, so they wouldn't develop tests for those. But the list is not that large. It's not that complicated.

And I guess another issue that really hasn't been emphasized is the fact of independence. If you're going to test, we truly believe those doing the testing have to be independent. They have to be independent. You can cite any number of reasons why. But common sense alone tells you that if whoever is doing this, if they have their list and they're independent, that risk of false positives is not that great. That can be dealt with, and the procedures you have can be uniform, so you're not worried about all the other procedural problems and, from the legal perspective, loopholes. And so you can. So I don't really think it's a question of false positives as much as a question of independence.

Senator FITZGERALD. Now, you did make the point, Mr. Shorter, that you thought Congress should act right away to amend the act that governs over-the-counter substances and that we should give the Attorney General the power to decide if a precursor should be included in the list of banned substances. Do you think that Congress should act right now to ban those substances that are sitting in front of you?

Mr. SHORTER. Oh, absolutely. I mean, again, if you come around to androstenedione, the reason it exists was you had a program where an entire Olympic team—to be on the Olympic team in East Germany from 1974 to 1989, you had to be on their drug program. You had to be taking the drugs.

Senator FITZGERALD. And that's what Mark McGwire used?

Mr. SHORTER. And this is what Mark McGwire used. It was developed by the East Germans as a very simple way of getting testosterone into their athletes.

Senator FITZGERALD. Mr. Fehr, do you think those substances should be a focus of the Major League Baseball's discussions on what substances should be banned?

Mr. FEHR. Whether I think so or not, I think it's clear that they will be a subject of our discussions.

Senator FITZGERALD. Okay.

Mr. FEHR. But let me make a further point and emphasize something that Mr. Shorter has said and that was reflected in my testi-

mony and Mr. Manfred's testimony and the booklet that we jointly prepared, which was distributed to players, which was attached to both of ours. We think that the reason androstenedione and DHEA and similar compounds are not regulated now is probably an accident. Probably nobody thought about it at the time. And in my testimony, I indicated that it probably is time to review that decision. I'm not personally familiar enough with the act to know whether Mr. Shorter's suggested legislative solution is the right one, but we invite you to reexamine that.

And let me put a deliberate point on it, if I can, in this way. Sooner or later in my discussions with players and in their discussions with one another, someone will raise the following question. They will say, "Are you telling me that if the Congress of the United States sees fit not to regulate X, whatever X is, and make it freely available at the drugstore down the street, and I'm an adult, and I'm of age, that somehow I can't buy it?" Because what we do in this country is we know there are risks to things, and we allow adults to make choices. If it ought to be regulated, we invite you to regulate it. If it ought not to be on the shelves, don't let it be on the shelves.

Senator DORGAN. Would you yield on that point?

Mr. Fehr, but that raises the question of, for example, andro, which is banned in the NBA, but perfectly legal to go purchase. It is not banned in baseball. By implication, I guess, you're suggesting that some of the substances that are banned by the NBA, under any type of testing program in Major league Baseball, should be allowed as long as they are not considered illegal or prohibited from purchase by the United States Congress. Is that what you're saying?

Mr. FEHR. What I am saying, Mr. Chairman, is something a little bit different than that. I am saying a couple of things. First of all, we will discuss all of these issues, as we're obligated to do and as I've indicated that we are fully committed to doing.

But I do want to make the following point. If these substances have the dangers that they are reputed to have, and we know of nothing in our research which suggests that that is wrong, then that suggests that there is a legislative or administrative remedy here which could go a long way toward addressing the problems, especially with children, that we've been talking about. And we invite you to reconsider that. There is, in fact, something the Congress can do.

Senator DORGAN. Senator Fitzgerald?

Senator FITZGERALD. I just would like to make the point, Mr. Chairman, that maybe we should have a follow-up hearing on the issue of whether Congress should act immediately to ban the over-the-counter substances in front of Mr. Shorter. Maybe we should hear from the other side on this issue. I'm sure the manufacturers and retailers of those products are probably bitterly opposed to such action. But those materials—as the doctor pointed out, too—can be purchased by high school kids. Is there any age requirement to go in and buy these products? So anybody—a 12 year old could go in a health food store and buy that stuff so they can look like Mark McGwire and hit like Mark McGwire. I think that would be a good follow-up hearing, Mr. Chairman.

And I want to thank all of the panel members here. I think this has been very informative. I would urge both sides in Major League Baseball negotiations to address this issue. I'd urge the owners and the league to be tough on this issue, too, and not take no from the players very easily.

And thank you all for being here.

Senator DORGAN. Mr. Colangelo, you wanted to comment?

Mr. COLANGELO. Well, whether or not something's available over the counter—you know, it's like looking for someone to help solve our problem. That's not the issue, in my mind. This is two parties, the Players Association and the owners, agreeing to ban certain substances. And there's a reason for that: not only what's been discussed here, the health of the individuals, but also, players don't want another player to have a competitive edge, and that's a big issue. That, in itself, is good enough reason for us to monitor our own business, and it would be great to have Congress help out. And certainly it's going to have impact with the over-the-counter sales, but that really should not have an influence on the agreement that should be made between the Major League Players Association and the owners.

Senator DORGAN. Let me ask a couple of additional questions, then.

Mr. Schwab, I read in the sports magazines and journals these days about high school football teams having linemen of 250 and 300 pounds, and I wonder about 300-pound high school linemen. How do you find them? Where do you get them? What are they taking, if anything? Can you tell me? I suspect you don't have statistical evidence, but give me your impression of what is happening in high school sports, especially with respect to football, where we see so many very large football players at the high school level.

Mr. SCHWAB. Like you, I share your amazement at how high school seniors who are 18 years old are graduating and can step into Division I college programs and play football as freshmen. That is amazing to me. When I graduated from high school 20 years ago, I was 220 pounds. And it took me two years to get to the point where I could play at the college level. So it's pretty clear to me that kids today are doing things, are taking supplements, taking drugs, that are helping them to get to that level to be able to play at that next level at very early ages. And it's not uncommon to see 300-pound high school athletes these days.

Senator DORGAN. But a 300-pound athlete who is taking supplements is not the same as a 300-pound athlete who is taking banned steroids. I think Mr. Shorter and Dr. Greisemer said that they can walk into a store someplace and buy these precursors and take them. I'm not suggesting the health consequence isn't the same. I don't know the answer to that.

But we have a situation today where many of these young athletes have total access to these supplements that are not banned. And I assume they are on the receiving end of advertisements. They also see their peers and other players using them. And I guess that's part of what Mr. Shorter and Mr. Greisemer talked about with respect to the danger.

That, I guess, brings me back to this issue. Mr. Fehr, I was trying to ask the question. If, for example, andro is prohibited in the

NBA, but it's not prohibited from purchase, you can walk in and purchase it at a store that sells vitamins and supplements and so on. What should be a banned substance is a function of what the Congress determines ought to be prohibited from sale.

I'll come back to that in just a minute. But, Mr. Shorter, the things that you can buy over the counter in a store, in many circumstances, I believe, would lead someone to test positive for drugs in the Olympics. Is that correct?

Mr. SHORTER. Yes. I cited in my testimony, for example, that 41 percent of the American products tested in an IOC survey basically contained substances not on the label: that's what's so insidious here. Not on the label, that'll get you banned.

Now, I must say, our testing techniques are very, very sophisticated. We can detect very, very minute quantities, and probably more than a lot of other testing that goes on. And that brings around the issue whether or not it's in the manufacturing or if you're in an industry that does not have the same regulation, let's say, as prescription drugs, whether or not there might be the temptation to perhaps lace some of your products so that they might be the talk of the health club rather than your competitor's product. So that opens up a whole new area.

But the net result is, we cannot recommend to any athlete—and at this past Olympic games, just about all the major nations of the world said to their athletes at the Salt Lake City games, "Don't take any supplements. You don't know what's in them. There's a good chance you'll have something in your body to get you busted."

Senator DORGAN. Dr. Greisemer, you talked about very young people, in junior high school, taking supplements. Can you describe that? Are these young football players? Young athletes? What kind of athletes are they, and what kind of supplements are they taking, and how young are they?

Dr. GREISEMER. We've had incidents of use and self-reported incidents of use down in 5th grade, so 11 and 12 years old. And it's easy for these kids to buy these products at health food stores, which has been demonstrated by one of the staff that you saw, his 11-year-old son. We see it predominantly in football players, but it's now getting fairly pervasive. We're even seeing some of the young ladies take this just for body image enhancement. And in some reports in younger middle school or high school students, approximately 50 percent of students are now just taking this for physique enhancement, and they're not even playing sports. It's very pervasive.

Senator DORGAN. Mr. Schwab, the same question?

Mr. SCHWAB. I think that the danger with these supplements is that it's not always the high level athletes that are using these supplements. It is also the marginal athlete who is trying to gain that edge—the wannabe athlete, the one that maybe isn't 6 foot 8 and 220 pounds, that isn't gifted genetically. These are also the kids who are using the supplements, and in very high numbers.

Senator DORGAN. Mr. Fehr, I wanted to allow you to expand on the point I made earlier. If there was some kind of an agreement in a major sport that only those substances that are prohibited for sale by the Congress would be banned, you would still, I assume, have performance-enhancement drugs available to athletes. I

mean, that's why I assume that, and I don't know this, but I assume the NBA puts andro on their list because they feel it's a performance-enhancing drug, and they don't want their athletes to be using it to enhance performance artificially. So can you respond to that?

Mr. FEHR. Yeah, three things, Mr. Chairman. First of all, I don't speak for, and don't purport to speak for, the NBA players or anyone other than my own constituency, so I'm not going to speak to those issues. I assume they do what they do for reasons that they believe are good and sufficient to themselves.

I think Mr. Manfred is right, that, first of all, the experience we have with a lot of the kind of substances we've just been discussing is a product of the period of time since the last collective bargaining agreement. And the mere fact that something is not prohibited by the Congress does not mean it should not be discussed in bargaining, et cetera. I think it will be. That's first.

Secondly, that does not resolve the question which may arise from time to time, which is, "If this substance is not prohibited, and if I'm of a certain age, is that not a choice that I should make?" Now, to ask the question doesn't answer it, but there are lots of things we say in this country that are different. You can't buy alcohol when you're in 5th grade. You can't buy tobacco when you're in 5th grade. You can't advertise tobacco to kids. You can't do any of that stuff.

Third—and this is most important point, I think, for me. And we all have kids, and this is why I think this is a much more significant issue than just baseball, although that's where the publicity has been. In fact, if children are using a lot of these substances, and we've just been talking about androstenedione, it is in large part because 11-year-olds can walk into stores and buy them. And there's no getting around that. And that is something that Congress can do something about, which is why we invite you to take a look at it. It doesn't answer the question as to what you do in baseball. But I respectfully suggest it's a much bigger question than what we do in baseball.

Senator DORGAN. Mr. Manfred?

Mr. MANFRED. I think, from our perspective, it is important, regardless of what Congress does with respect to this over-the-counter issue, that that issue should be dealt with in the short term in the collective bargaining process. And I really say that for two reasons.

First of all, in terms of testing, you can test for andro with the same type of accuracy that you can test for any anabolic steroid. And, in fact, most scientists believe that it is, in fact, an anabolic steroid, which takes me to the second point.

Those over-the-counter substances, in terms of their impact on the body and the impact on the play of the game, have exactly the same effect as steroids. And so, while there may be this flaw in terms of the regulatory process, I think it's impossible for us to look the other way and/or to wait for that flaw to be fixed. It's an issue that needs to be addressed privately, because they, in effect, are steroids.

Senator DORGAN. Let me conclude by saying that we should never, and can never, and will never take the joy out of sports.

Every young boy or girl in this country aspires to look up to a hero in sports and to emulate them and to play sports. And it's very important for us to understand the context of a hearing of this type.

The Commerce Committee, in this Subcommittee, has sports as its jurisdiction. We have spent more time, perhaps, on Olympic issues than others in past years, especially on the anti-doping issue. But Senator McCain had suggested, and I agreed, that we should hold a hearing of this type because I think that, while the recent discussion has been about baseball, there has been broader discussion about the use of steroids in sports and the use of performance-enhancement in sports. It has a powerful influence on young people in this country, an enormous influence on our youth.

And so the question is, what's happening? What can be done about it? How can we apply public pressure? How can the American people have a voice and a role in applying public pressure to achieve the right result? And the right result, it seems to me, is drug testing: rigorous drug testing. And to say to all athletes, professional athletes, and especially to young athletes, that sports ought to be played on a fair basis, without performance-enhancing drugs. And I think everyone agrees on that point.

So my hope is that this hearing will contribute to some understanding and help develop some pressure with respect to a number of areas of sports to do more testing and to send a message, Dr. Greisemer and Mr. Schwab, to those young kids across this country that this is not the way to succeed in sports.

I want to thank all of you. You've come from, in many cases, across the country to testify. And, Mr. Fehr, you're busy. You've got meetings to begin tomorrow. Mr. Colangelo, you've traveled halfway around the country. You should be smiling broadly, because you have a North Dakotan, Rick Helling, who you've added to your staff at bargain prices, and he's winning almost every outing these days. We're very proud of him.

But let me thank all of you who have come today. This Subcommittee will be discussing this issue in some detail in the future, as well.

This hearing is adjourned.

[Whereupon, at 11:36 a.m., the hearing was adjourned.]

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